सत्यमेव जयते

# आदिवासी संशोधन पत्रिका

# TRIBAL RESEARCH BULLETIN

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मा. मधुकरराव पिचड आदिवासी विकास मंत्री महोदय यांचे ३२ वी नियमक मंडळ बैठकीमध्ये अदिवासी संशोधन व प्रशिक्षण संस्था पुणे येथे आगमन होत असताना सोबत मा. डॉ. गारे व आयुक्त वाय.पी.एस. तोमर स्वागत करीत असताना.

मा. मंत्री महोदय आदिवासी विकास श्री. मधुकरराव पिचड यांच्या अध्यक्षतेखाली झालेली ३२वी नियमक मंडळाची दि. १०/०२/२००४ रोजी आदिवासी संशोधन व प्रशिक्षण संस्था पुणे येथील आयोजित बैठक.

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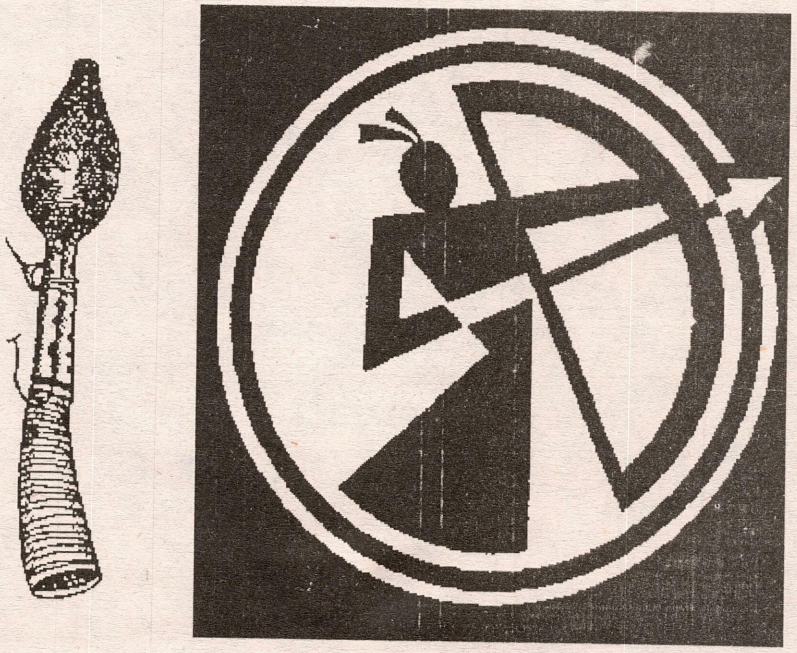
# आदिवासी संशोधन पत्रिका

# TRIBAL RESEARCH BULLETIN



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# EDITORIAL

The Tribal Research Bulletin is a biannual publication, published by Tribal Research and Training Institute, Pune. The bulletin comprises of two sections. In the English section there are seven articles whereas in the Marathi section there are three articles.

In the English section the first paper captioned "A study of biological factors associated with fertility and mortality among the oraons of Assam" by Sengupta and Gogoi, unveils the influence of biological determinants on fertility & mortality among the oraons of Assam.

The next paper by Dr. Lakhminarayana presents an analysis the planning, implementation and evaluation of tribal development programmes in selected tribal blocks of Pune district. The third paper is an outcome of an evaluation study of Bee-keeping programme implemented for the Madias of Gadchiroli. Dr. S.G.Rajora in the fourth paper has presented a case study of eco-friendly and sustainable development programmes in Dagoch village of Udaipur district in the State of Rajasthan.

Dr. K. Ailaiah in his article has revealed the importance of change in tribal communities. Dr. Sunil Goyal and Ms. Sangeeta Goyal present the significant role of tribal women in Agriculture. Shri G.K.Waman, B.R.Desai & R.P.Patil suggest the constraints faced by the tribal farmers in adopting improved agricultural practices.

In the Marathi section Shri S.N.Kulkarni emphasizes the need to develop the Primitive Tribal Groups at par with other tribal groups. Shri Indershah Madavi has presented a case study of Shri Chander Dhondu Sole – a bamboo craft artist, who has been earning a good sum of money from his business. The last article by the same author presents a success study of watershed development programme in Vasali and Varshingve villages.

I hope that the findings presented in these papers will help researchers and policy makers.

Editor

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**श्री.इंदरशाह मडावी**

# A STUDY OF SOME BIOLOGICAL FACTORS ASSOCIATED WITH FERTILITY AND MORTALITY AMONG THE ORAONS OF ASSAM

* Sarthak Sengupta ,**Arundhati Phuka Gogoi

## INTRODUCTION

A study of differential fertility and mortality is useful in identifying factors, which determine fertility levels among various groups and sub-groups. Human reproduction is greatly influenced by several biological determinants such as age at menarche, adolescent sterility, large inter-birth spacing due to breast feeding, maternal age at conception, birth order, maternal health and nutritional status, embryonic wastages and pre-reproductive mortality etc. Therefore, it is not an easy task to find out one particular biological factor which effect the fertility of a group of women because it may be the influence of more than one factor.

Studies focusing association of biological factors with fertility and mortality especially at the micro-level in specific socio-economic groups have not yet been much explored in north east Indian context. At present empirical data from the population groups of Brahmaputra valley, Assam is very scant. In the present note an attempt has been made to explore possible influence of a few biological determinants on the pregnancy outcome, reproductive wastage's and mortality of the Oraon women inhabiting in two contrast settings, i.e. in tea-garden *lines* and ex tea garden *bastes* of upper Assam.

The Oraons are a Dravidian speaking population and are believed to be migrants from southern India settling in the Chotanagpur plateau many centuries ago ( Dalton, 1872; Hunter, 1877; Risley, 1891; Roy, 1915). They are commonly known as *Kurunkh, Dhangar, Uraon* etc. at different places. In Assam, they call themselves as *Urang*. Their principal settlement is in the Ranchi district of Jharkhand But they are also found in Bihar, Assam, West Bengal, Orissa and Madhya Pradesh.

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Majority of the Oraons in Assam identify themselves as Hindu ( *Sansari)*, while Oraons subscribing to Christian faith are also considerable in number. An important fact worth-mentioning here is that though the Hindu and the Christian Oraons in Assam live side by side, the interaction between these two segments seem to be very limited in their day to day socio-cultural life. The Hindu Oraons have been seen to avoid inter-dining and matrimonial alliances with the Christian counterparts.

The Oraons are settled in tea gardens of Assam more than a century ago and are far remote from their native land. In tea gardens of Assam, labour quarters are distributed in cluster which are locally known as *line*. These consists of lanes and by-lanes. Long rows of quarters with definite compounds for each family are built on the either side of the lanes and by-lanes usually facing each other. On the other hand, ex tea garden Oraon labour population are settled mainly in the rural areas of Assam by establishing villages, occupying Government *khas* land or unused tea garden land in the vicinity of the tea estates forming an integral part of Assam rural folk. At present the chief means of livelihood of most of the ex tea garden labourers is agriculture, while some of them earn cash as daily labourers and workers in tea plantations as *faltu labourers* or casual workers

MATERIAL AND METHOD:

The entire data on reproductive performance were collected from 220 married women of whom 122 are from tea gardens (Hindu = 72, Christian = 50) and 98 from ex tea garden Oraon labour settlements (Hindu = 52, Christan = 46). For this study, six tea gardens (Basmotia, HatiaJi, Kailashpur Lengrai, Nandanban and Timakpho Tea Estates) and four ex tea garden Oraon labour settlements ( Basapather, Dihinghula, Siringhula, Bamunikuriha Gaon ) in Madarkhat and Tengakhat Circle under Dibrugarh district were selected.

While interviewing the mothers, the detail reproductive histories i.e. the number of offspring, living and dead, miscarriage and still birth including sex and age of living and dead children have been collected. Apart from these, age at menarche, maternal age at conception, birth order, height and weight were also collected as these are purported to have an effect on reproductive performances.

Women aged 45 years and above, whose husbands are alive and have at-least one child are only interviewed. It may also be mentioned that abortion cases reported are those of spontaneous

abortions only. No information has been obtained on cases of induced abortion. Data on height and weight were collected for each Oraon women following standard techniques (Martin, 1928). Weight/height$^2$ were ulilized to assess the prevalence and forms of mal-nutrition among Oraon women.

For determination of age, on many occasion we had to estimate with reference to some important local events and to the ages of some other persons who seemed to be in the same age group. Therefore, the ages were estimated and are approximate only. Cross checks were made to verify the reliability, however.

RESULTS AND DISCUSSION:

Age at menarche:

The menarcheal age constitute an important aspect of population dynamics. Wide variation in menstrual cycle, which is caused by the interaction of number of factors, being responsible for differential fertility in women. The increase in age at menarche is usually accompanied. by some physiological changes, which subsequently has substantial effect on fertility.

In the present study, in all the sub-samples, the mean number of pregnancies and live births decreases as age at menarche increases (Table 1).

Table 1 :
Menarcheal age and fertility among Oraon women

| Groups Religion | Age at Menarche (in yrs) | No.of mothers | Preg-nancy (mean) | Live birth (mean) | Aborti-on % | Still birth % | infant | Mortality | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Child % | Juveni le % |
| TEA GARDEN | | | | | | | | | |
| Hindu | 12 | 3 | 7.67 | 7.33 | - | 4.35 | 4.55 | - | - |
| Oraon | 13 | 33 | 6.76 | 6.27 | 2.69 | 4.48 | 6.76 | 4.83 | 0.97 |
| | 14 | 36 | 6.41 | 5.86 | 4.33 | 4.33 | 8.53 | 2.84 | - |
| Christian | 12 | 9 | 6.11 | 5.56 | 5.45 | 5.45 | - | - | - |
| Oraon | 13 | 21 | 5.53 | 5.10 | 6.14 | 5.26 | 4.57 | 2.80 | - |
| | 14 | 20 | 5.50 | 4.95 | 5.45 | 4.55 | 3.03 | 1.01 | 2.02 |
| EX TEA GARDEN | | | | | | | | | |
| Hindu | 12 | 4 | 7.75 | 7.25 | 3.23 | 3.23 | 13.79 | - | - |
| Oraon | 13 | 26 | 7.50 | 6.77 | 5.13 | 4.62 | 3.98 | 2.27 | - |
| | 14 | 22 | 5.77 | 5.23 | 5.51 | 3.94 | 6.97 | 2.61 | 0.87 |
| Christian | 12 | 4 | 7.75 | 7.00 | 6.45 | 3.23 | 7.14 | - | - |
| Oraon | 13 | 29 | 7.34 | 6.72 | 4.69 | 3.76 | 8.21 | 1.03 | - |
| | 14 | 13 | 5.38 | 4.54 | 8.57 | 7.14 | 8.47 | - | - |

The average fertility is considerably high in lower menarcheal age group than those in the higher menarcheal age group.

The embryonic wastages as well as pre-reproductive mortality, particularly infant mortality increases with rise in the age at menarche of mothers. Thus, it is apparent that fertility rate increases in the women who experience menarche at relatively younger ages, and such rate decrease considerably as the menarche is delayed.

Maternal age and birth order:

Maternal age at first as well as subsequent conception has a profound influence on the outcome of pregnancy and the later survival of children. Universally the prenatal wastages, mortality rate of infants and children born to younger mothers is higher. Birth order also exerts a definite pattern of influence on reproductive wastages. Very often the risk of the high wastages exists for the first and second order of pregnancy, declines for the third and again increased from the fourth or fifth onwards. Varieties of congenital defects, frequencies of abortion, still-birth, multiple birth increases along with advancing maternal age and birth order.

Among the Oraon, incidence of miscarriage/ abortion is significantly high in mothers who experience conception at relatively young ages, declines considerably in the mothers of the age group between 25 to 29 years but increases again with the rise in the age of mothers at conception ( Table 2). The Oraon mothers conceived at the age between 15 to 19 years, experience on an average nearly five times the incidence of miscarriage in comparison to the women who become mothers at the age group between 25 to 29 years.

Table 2 :

Frequency of abortion according to maternal age

| Mothers age at conception | TEA GARDEN | | | | EX TEA GARDEN | | | | ORAON | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hindu | | Christian | | Hindu | | Christian | | Hindu | | Christian | |
| | Conception | Abortion | Conception | Abortion | Conception | Abortion | Conception | Abortion | Conception | Abortion | Conception | Abortion |
| 15-19 yrs | 22 | 9.09 | 10 | 30.00 | 18 | 16.67 | 25 | 20.00 | 40 | 12.50 | 35 | 22.86 |
| 20 – 24 yrs | 163 | 5.52 | 109 | 5.50 | 101 | 8.91 | 100 | 7.00 | 264 | 6.82 | 209 | 6.22 |
| 25 - 29 yrs | 153 | 1.96 | 96 | 3.13 | 100 | 1.82 | 106 | 4.72 | 263 | 1.90 | 262 | 3.96 |
| 30 - 34 yrs | 106 | 1.89 | 50 | 4.00 | 88 | 2.27 | 57 | - | 194 | 2.06 | 107 | 1.87 |
| 35 - 39 yrs | 30 | - | 12 | 16.67 | 34 | 5.88 | 24 | 4.17 | 64 | 3.13 | 36 | 8.33 |
| 40+yrs | 3 | - | 2 | - | 2 | - | 2 | - | 5 | - | 4 | - |
| All ages | 477 | 3.35 | 279 | 5.73 | 353 | 5.10 | 314 | 5.73 | 830 | 4.10 | 593 | 5.73 |

In all Oraon sub-samples, the incidence of still-birth is found to be relatively higher in mothers in the age group of 15 to 19 years but abruptly decreases thereafter (Table 3). In relatively late reproductive ages, mothers above 35+ years, the still birth rate again show a steady rise with the progress of the age of mothers at conception.

Table 3 :
Frequency of Still birth according to maternal age

| Mothers age at birth | TEA GARDEN | | | | EX TEA GARDEN | | | | ORAON | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hindu | | Christian | | Hindu | | Christian | | Hindu | | Christian | |
| | No. of birth | Still birth | No. of birth | Still birth | No. of birth | Still birth | No. of birth | Still birth | No. of birth | Still birth | No. of birth | Still birth |
| 15-19 yrs | 20 | 20.00 | 7 | 28.57 | 15 | 26.67 | 20 | 30.00 | 35 | 22.86 | 27 | 29.63 |
| 20 - 24 yrs | 154 | 5.19 | 103 | 8.74 | 92 | 3.26 | 93 | 3.23 | 246 | 4.47 | 196 | 6.12 |
| 25 - 29 yrs | 150 | 2.00 | 94 | 2.13 | 108 | 0.93 | 101 | 3.96 | 258 | 1.55 | 195 | 3.08 |
| 30 - 34 yrs | 104 | 3.85 | 48 | 2.08 | 86 | 3.49 | 57 | - | 190 | 3.68 | 105 | 0.95 |
| 35 - 39 yrs | 30 | 3.33 | 10 | - | 32 | 12.50 | 23 | 4.35 | 62 | 8.06 | 33 | 3.03 |
| 40+yrs | 3 | 33.33 | 2 | - | 2 | - | 2 | - | 5 | 20.00 | 4 | - |
| All ages | 461 | 4.56 | 264 | 5.30 | 335 | 4.48 | 296 | 4.73 | 796 | 4.52 | 533 | 5.25 |

The highest incidence of abortion (Table 4) as well as still birth (Table 5) found in the first birth order. Although the effect of birth order on embryonic

Table 4 : Frequency of abortion according to birth order

| Birth order | TEA GARDEN | | | | EX TEA GARDEN | | | | ORAON | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hindu | | Christian | | Hindu | | Christian | | Hindu | | Christian | |
| | Conception | Abortion | Conception | Abortion | Conception | Abortion | Conception | Abortion | Conception | Abortion | Conception | Abortion |
| 1st | 72 | 16.67 | 50 | 10.00 | 52 | 9.61 | 46 | 15.22 | 124 | 13.71 | 96 | 12.50 |
| 2nd | 70 | - | 49 | 8.16 | 48 | 10.41 | 44 | 4.55 | 118 | 4.24 | 93 | 6.46 |
| 3rd | 68 | - | 44 | 4.55 | 48 | 6.25 | 43 | 6.98 | 116 | 2.59 | 87 | 5.75 |
| 4th | 68 | 4.41 | 43 | 2.33 | 48 | - | 42 | 2.38 | 116 | 2.59 | 85 | 2.35 |
| 5th | 62 | 1.61 | 37 | 5.40 | 46 | 2.17 | 39 | 2.56 | 108 | 1.85 | 76 | 3.95 |
| 6th | 36 | - | 22 | 4.55 | 43 | 2.33 | 34 | 2.94 | 99 | 1.01 | 56 | 3.57 |
| 7th | 45 | - | 15 | - | 34 | 5.88 | 25 | 4.00 | 79 | 2.53 | 40 | 2.50 |
| 8th | 25 | 4.00 | 11 | 9.09 | 18 | - | 17 | 5.88 | 43 | 2.33 | 28 | 7.14 |
| 9th | 10 | - | 6 | - | 7 | 14.28 | 10 | - | 17 | 5.88 | 16 | - |
| 10th | 2 | - | 2 | - | 3 | 33.33 | 5 | 20.00 | 5 | 20.00 | 7 | 14.29 |
| 11th | 2 | - | - | - | 2 | - | 3 | - | 4 | - | 3 | - |
| 12th | - | - | - | - | - | - | 3 | - | - | - | 3 | - |
| 13th | - | - | - | - | - | - | 1 | - | - | - | 1 | - |
| 14th | - | - | - | - | - | - | 1 | - | - | - | 1 | - |

wastages is not as clear as the effect of maternal age, albeit somewhat tenous and inverse relation exists between birth order and frequency of both abortion and stillbirth among all the sub-samples of Oraan. In them, comparatively higher embryonic wastages are found in first birth order, which gradually goes on decreasing through subsequent birth orders but again shows the abrupt leap from fifth to sixth birth order onwards

Table 5

Frequency of still-birth according to birth order

| | TEA GARDEN | | | | EX TEA GARDEN | | | | ORAON | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hindu | | Christian | | Hindu | | Christian | | Hindu | | Christian | |
| Birth order | No.of birth | Still birth | No.of birth | Still birth | No.of birth | Still birth | No.of birth | Still birth | No.of birth | Still birth | No.of birth | Still birth |
| 1st | 54 | 11.11 | 37 | 21.62 | 41 | 14.63 | 37 | 5.41 | 95 | 12.63 | 74 | 13.58 |
| 2nd | 67 | 4.48 | 43 | 4.65 | 41 | 4.81 | 39 | 7.69 | 108 | 4.63 | 82 | 6.10 |
| 3rd | 65 | 4.62 | 39 | 7.69 | 41 | 9.75 | 40 | - | 106 | 6.60 | 79 | 3.80 |
| 4th | 63 | 3.17 | 42 | 2.38 | 46 | 4.34 | 38 | 7.89 | 109 | 3.67 | 80 | 5.00 |
| 5th | 59 | 3.39 | 35 | - | 41 | 12.20 | 37 | 2.70 | 100 | 5.00 | 72 | 1.39 |
| 6th | 54 | 3.70 | 21 | - | 42 | 2.38 | 30 | 10.00 | 96 | 3.13 | 51 | 5.88 |
| 7th | 45 | - | 15 | - | 30 | 6.67 | 23 | 4.35 | 75 | 2.67 | 38 | 2.63 |
| 8th | 23 | 4.34 | 10 | - | 11 | 5.88 | 16 | - | 40 | 5.00 | 26 | - |
| 9th | 10 | - | 6 | - | 6 | - | 9 | 11.11 | 16 | - | 15 | 6.67 |
| 10th | 2 | - | 2 | - | 2 | - | 4 | - | 4 | - | 6 | - |
| 11th | 2 | - | - | - | 2 | - | 3 | - | 4 | - | 3 | - |
| 12th | - | - | - | - | - | - | 3 | - | - | - | 3 | - |
| 13th | - | - | - | - | - | - | 1 | - | - | - | 1 | - |
| 14th | - | -- | - | - | - | - | 1 | - | - | - | 1 | - |

Mothers health:

Nutritional status and health of mother influences fertility; peri-natal, neonatal, post neonatal and infant mortality to a great extent. It has been observed that greater number of childhood deaths occurred at the lower levels of both height and weight of the mothers. Under nourished women experience higher incidence of foetal wastages.

In the present study, classification of grades of malnutrition among Oraon women were estimated on the basis of height$^2$ following International standard. Depending upon the height$^2$ values, the subjects were classified into two categories - underweight or under-nutrition ( less than 2.00) and normal (2.00 - 2.40). It has been reported that (Garrow, 1983) mortality rates is higher in those with height$^2$ beyond the range of 2.0 - 2.5, minimum for those with the index between 2.0 - 2.5. Prevalence rates of diabetes, digestive diseases, cerebro-vascular diseases, coronary heart diseases, and cancer is higher in those with height$^2$ more than 2.5. Mortality rate also higher in those with index below 2.0.

Table 6.
Fertility according to form of malnutrition among Oraon mother

| Demographic variables | TEA GARDEN | | | | EX TEA GARDEN | | | | ORAON | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hindu | | Christian | | Hindu | | Christian | | Hindu | | Christian | |
| | I | II | I | II | I | II | I | II | I | II | I | II |
| Total No.of mothers | 37 | 35 | 22 | 28 | 30 | 21 | 33 | 12 | 67 | 56 | 55 | 40 |
| Mean conception | 6.46 | 6.69 | 5.81 | 5.50 | 6.30 | 7.19 | 7.30 | 5.75 | 6.39 | 6.88 | 6.65 | 5.58 |
| Mean live births | 6.08 | 6.14 | 4.91 | 5.14 | 5.63 | 6.57 | 6.64 | 4.92 | 5.88 | 6.30 | 5.95 | 5.08 |
| Abortion rate(%) | 5.86 | 0.85 | 6.40 | 5.19 | 5.82 | 4.64 | 4.15 | 11.59 | 5.84 | 2.34 | 4.92 | 7.17 |
| Still birth rate(%) | 5.86 | 2.99 | 7.20 | 3.25 | 4.76 | 3.97 | 4.98 | 2.90 | 5.37 | 3.38 | 5.74 | 3.14 |
| Mortality rate(%) | | | | | | | | | | | | |
| Neonatal | 4.89 | 2.79 | 3.70 | 0.69 | 5.92 | 3.62 | 5.48 | 3.39 | 5.33 | 3.12 | 4.89 | 1.48 |
| Post Neonatal | 4.89 | 2.79 | 3.70 | 0.69 | 5.92 | 3.62 | 5.48 | 3.39 | 5.33 | 3.12 | 4.89 | 1.48 |
| Child | 4.00 | 3.26 | 1.85 | 1.39 | 2.37 | 2.17 | 0.91 | - | 3.30 | 2.83 | 1.00 | - |
| Juvenile | - | 0.93 | - | 1.39 | - | - | - | - | - | 0.57 | - | 1.00 |

Note: I = Underweight! undernutrition; II = Normal

In both tea garden and ex tea garden Hindu Oraon sub-samples, women belonging normal category have comparatively higher mean conception and mean live births. On the other hand, underweight (under-nutrition) Christian Oraon mother have relatively higher number of conception and live births. In all sub samples, the women belonging to under-nutrition category, also record highest frequency of abortion, while such incidence is comparatively low among mothers who are categorized as normal. High incidence of still birth also recorded among undernourished women. The present evidence indicate that the incidence of infant and child mortality increases with the corresponding decrease in the quality of mothers health. In both the settings, irrespective of religion, incidence of pre-reproductive mortality is comparatively higher among the offspring of under-nourished mother compared to those who were categorized as normal.

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# IRDP IN TRIBAL BLOCKS OF PUNE DISTRICT

*Dr. Lakshminarayana R. Tarodi

In part I, we have obtained a glimpse of IRDP in Pune district. To obtain first hand knowledge, in part II, selected tribal villages Le. Dehene (Khed), Gohe Budruk (Ambegaon), Tambe (Junnar) ,are visited for the purpose of clarifying some issues. Hope the discussion with the tribal beneficiary and officials will provide as clear a picture as possible regarding the IRDP in tribal areas.

PART - II

SURVEY :

First hand information supplied by officials at various levels reveal that the survey for selecting the beneficiaries suffered from two major drawbacks.[30] In the first place, some potential beneficiaries were left out as they were out of station. Among the three tribal blocks i.e., Khed, Ambegaon and Junnar, except Khed this was a major problem. Hence, in Ambegaon six villages were partly resurveyed and in Junnar supplementary investigations encompassed the whole villages Ex. Narayangaon, Enere and Bhele. This has happened due to popular pressure. In other words, political awareness of people in tribal areas is gaining ground. Secondly, beneficiaries supplied wrong information regarding their income and landholding to the extent of ten per cent at Khed and Ambegaon blocks. Of course, some applications were rejected at the time of scrutiny at the block level. This shows that BPL list is defective and it is generally believed that about 15-20 percent families, which were above poverty line, were included in the list.

SCRUTINY:

While scrutinizing the applications a number of mistakes were noticed. Generally, lack of signature/thumb impression of the beneficiary or the signature of the official, lack of documents like caste/tribe certificates, 7/12 extracts, 'No Due' certificate from Land Development bank, PDCC bank, Cooperative societies, non-mentioning of survey numbers created problems for quick sanction.

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DECISION REGARDING ASSETS:

V. L. W.s / E.O.s discuss various proposals suitable to the local area and also potential beneficiary's experience and skill in handling an asset or activity with the person and then only asset is provided or an activity is encouraged. This practice is followed in Khed. Ambegaon, Haveli. Baramati and Indapur. However, at Junnar mostly the scheme/asset suggested by the beneficiary is accepted by the officials. This makes it clear that there is no uniformity in decision-making process regarding- the asset or activity.

Purchase mechanism :

B.D.Os generally send live Stock Development Officer, Agricultural Extension Officer or Extension Officer Industries depending upon the type of assets to be purchased at the weekly bazar alongwith bank representative, insurance officer and the beneficiary. In making final decision importance is given to the views of subject matter specialist. so far as Khed is concerned, sheep and goats are purchased locally at weekly bazar. But for cows and buffaloes bazars at Chakan, Yavat, Dhule, Satara and Belhe are visited particularly by PDCC bank, which purchases milch animals in large numbers. Machines are aplenty in Rajgurunagar and hence pose no problem. In brief, it is clear that depending upon situation at hand purchase is done, though; by and large 10c_1 purchase is opted. It is noticed that during the operation of IROP for the last few years if purchase is done at the local bazar, there is a possibility of mutual understanding between the beneficiary and the seller with a view to increase the cost of asset which is borne by the government. Secondly, some of the animals like buffalo and bullock pairs and goats that are available at the local markets are not healthy. Extreme manipulation that can take place in the purchase of animals is stated by EO (Stat) Ambegaon wherein people bring their own animal and repurchase it. This type of manipulation is at the order of 15 percent. Hence. assets are now purchased outside the local area. This makes it clear that the government is trying its best to minimize mal- practices while purchasing and try to ensure the quality of assets. B.D.Os. from Ambegaon and Khed stated that in the existing wholesale system there is always the possibility of hiking prices. To curb it. the B.O.O. (Ambegatm) suggested piecemeal purchase once in fortnight, which helps in curbing price hike. But in this system, time and energy is wasted. It poses the problem of coordination between the B.O.O., purchase

committee members and the beneficiary.

Problems of Recovery :

There are .some willful defaulters (Ambegaon, Indapur,

Haveli (40-50%) Velhe, Oaund, Khed, Shirur). The impression of beneficiaries is that the government in due course waive the loan amount. Educated beneficiaries try to hoodwink the government. For ex. in Rajgurunagar and Chakan (Khed block)! the number of defaulters are more. BOOs: m Khed, Shirur and Daund stated that local leaders also encourage defaulters. The same view is expressed by Eos *from* Junnar, Ambegaon, Daund, Khed and Baramati, Shirur and Velhe. The taste of easy loan ultimately make people more dependent on government and credit institutions rather than becoming self dependent. This will defeat the purpose *for* which financial assistance is provided. However, majority of Scheduled Tribes in Khed are prompt in repaying the loan amount.

CEO from Khed stated that in non-tribal areas lift irrigation, petty business and provision stores are encouraged. In tribal areas *for* Thakar tribes sheep, goat, poultry and buffaloes are provided and dairy activity is encouraged. As a result, the recovery in these areas is 85 percent. Moreover, Tribals are more fearful towards government, which may be the reason for high percentage of recovery in these areas.

For the purpose of recovery, in Khed, Shirur, Velhe, B.LC. Committee meetings are used. But this method did not proved effective in recovering loan amount. In Khed, bankers meetings are held once in a month and banks are requested to send the list of defaulters at BDOs office, which in turn sent to Tahsildar for appropriate action. But due to lack of interest among the officials this Committee is almost defunct in Khed. ,_.;

In Ambegaon, Indapur and Junnar credit camps are conducted for recovery by EOs. In Ambegaon, gramsevaks and Talathis are specially instructed to take care of defaulters. In Junnar, at the camp, defaulters are summoned and cajoled to pay up. In Ambegaon and Khed blocks the strategy of rejecting the applications for second dosage from a village wherein defaulters are more is put into practice. Unless most of the defaulters of the marked out villages do not repay the loan amount applications are kept pending.

Monitoring :[35]

For the purpose of monitoring officials unexpectedly visit the villages in the late afternoon or evening so that the beneficiary could not hoodwink them by informing that assets like milch animals are taken out for grazing, washing etc. Some times, prior information of the visit to beneficiary is conveyed through VLW and contact the beneficiary at the next available opportunity. Officials also ascertain through indirect enquiry with the neighbors and VLWs the position of assets.

BDO from Khed stated that in remote villages it is difficult to monitor due to lack of communication and transportation facilities. EOs in Khed stated that monitoring is done through contacting banks and meeting VLWs either in Grampanchayat or Panchayat Samiti meetings. In Junnar camps are organized for this purpose. BDOs from Khed, Baramati and Ambegaon stated that they entirely depend upon the progress reports of EOs and VLWs. This makes it clear that in these three blocks there is a possibility of laxity in supervision. and control.

Main Problems in Tribal Areas :[36]

The main problem in tribal area is that of sanctioning of proposals for loan. It is pointed out that commercial banks pose problems in sanctioning loan. Because they wish to make sure that the potential beneficiary is dependable regarding loan clearance. This is natural because cooperative banks have power to recover loan by confiscating the assets. Commercial banks have no such powers. In addition to this, to obtain loan from cooperative banks potential beneficiaries should be shareholders. For obtaining loan from commercial banks they need not be shareholders. In other words, a beneficiary without restraint do pose a problem to the banks. In addition to this, identifying the dependable persons on ant individual basis "is a difficult task. Hence, credit camps were first conducted for 'sanctioning of proposals to tribals' in Ambegaon. For holding credit camp, BOO, EOs, Talathi, Secretaries of Dairy Co-operative Societies and Chairman of village panchayats, social workers, local leaders, village level workers, bank managers together visit a village on a particular day and complete the work. This has produced the problem of coordination and saves time of the officials. It also reduce the problem of tribals and save their time in visiting different offices for obtaining necessary' documents and getting the proposals sanctioned. In the presence of all, bank managers interview the potential beneficiaries and the applications are either, sanctioned or rejected.37 Another important reason mentioned was that some of the Talatis unnecessarily delay in providing 7-12 and 8A documents. Oiling the palm of administrative machinery at various level is reduced to a great extent due to holding of credit camps. After learning from the experience of Ambegtaon, block officials at Khed also started to have credit camps. The beneficiaries at Dehene, Gohebudruk and Tambe villages stated that to obtain the benefit they have to visit banks a minimum of 3-4 times and in two cases Le. Mrs. Sattu Saku Talape Kasabai visited banks more than 12 times and Mrs. Hansabai Sakharam Potkule visited central Bank of India, Shinoli for more

Panchayat at Vadgaon, Kasimbe and Chas.[43]

In hilly areas, particularly in Western side of the Junnar Tq. maintaining cross breed cow and goat keeping is not possible due to heavy rains. Assets like goat and sheep unit provide income only after six months. In Ambegaon and Junnar especially due to lack of knowledge and experience tribals either mishandle the assets or do not feed them properly,[44] This results in insufficient production of milk, Due to lack of proper maintenance and the impatient tendency of tribals to get the benefit instantly results in failure of the scheme. So it is clear that unless human resource development is coupled with development schemes material help in cash or kind do not lead to development.

In Dehene a VLW stated that out of 1500 households 350 are in BPL list. Out of that 250 got benefit under IRDP. Out of these beneficiaries 125 belong to ST families. Among these beneficiaries 70 buffaloes are doing well and 16-20 cows are not doing well due to lack of green grass and climatic conditions. So also in Khanabwadi due to lack of green grass 10-15 cows are not doing well.[45] This makes it clear the reasons for preferring a particular asset in the tribals areas.

In tribal areas goat milk is also used for household purpose and marketing. Beneficiaries sell the milk to co-operative dairies. In Tambe, there was a dairy society but it was closed down in 1985 dye 10 insufficient milk production and party politics.[46] Meagre price for milk was offered by the dairy society. So the tribals in Tambe (Junnar) as in Ambegaon sell milk or milk products in nearby areas (Tq, Hqs.) In Ambegaon and Khed there is no problem of marketing milk or Khava.

In Malunge there is demand for bullock pairs and sheep. Here 10 of bullocks and also 30 sheep and goat units are distributed. One each got IRDP facility for bullock cart, speakers and grocery shops and only 2 for cycle shops. In Bambholi also sheep, goat and bullock pair are distributed.[47]

However, in Rajgurunagar among 150 who opted milch animals there are 75 cows, 40 buffaloes, 20 bullock pairs and 15 goat units. In the category of agricultural implements four each opted for EMPs and Oil Engines respectively. 4 beneficiaries got bullock carts. In the business sector 25 Tea stalls, 10 paan shops, 4 stationery stores, 4 for cobbler shop and 01 each opened .barbers and carpentry shops, one each opened bangle shop, hardware store, fabrication and motor cycle repair shops. 25 beneficiaries obtained sewing machines.[48] In other words, whereas 162 beneficiaries belong to agriculture and allied activities 74 belong to small business and service category. In plain/small town area cows are provided and

than 15 times?[38] Such instances are common in all the blocks and make people not to avail the benefit.

Preference of Tribals :[39]

When the author has visited Dehene on 12-04-91 there were 95 beneficiaries (data supplied by EO). Among them 62 are having income up to Rs. *3500/-* and remaining 33 belonged to income range of Rs. 3500-6400. Out of them 51 got IRDP benefit. Among them 44 preferred milch animals (35 buffaloes, 03 Cows, 06 goat units) 02 each for cobbler trade and grocery shop and one each for dry fish marketing, rope making and band set. Moreover, those obtained buffaloes under IRDP earlier have cleared the loan or in the process of clearing it. For example, Maruti Lunna Kavale (1989), Gangaram Mahadu Khade (1988-90), Bhodangan.Bogte (1988-92) all are having buffaloes. In fact, one beneficiary Ramdeoji Gaikwad who got Rs. 2,000/- for establishing cobbler's trade after clearing the loan has freshly applied for buffalo. These examples make it clear that buffaloes are preferred more than cows. Another beneficiary Aminabai Chandore Atar has opened Bangle shop with the help of Rs. 7,000/- from IRDP had already cleared Rs. 3,000/- In Gohe Budruk (Ambegaon). At Tambe also more number of beneficiaries opted for buffaloes. The reason for preferring buffaloes or sheep or obtaining the same through IRDP is not far to seek.

Tribals prefer buffaloes and sheep/goats because they can self-feed. But cross breed cows required to be tied to a particular place and it should be fed by the beneficiary with cattle feed. This requires money as well as easy accessibility to ready made food which is available in big town_ only. Moreover, crossbreed cows get illness frequently. Since veterinary facility is inadequate or nil at distant villages it is difficult for the tribals to maintain the cross breed cows. Milk products produced from cows are not tasty and cannot be stored for a long time. For example, Khava made by cow's milk after some time emanate bad smell. But the milk or milk products from buffaloes last for a longer duration as it do not emanate bad smell. There are nearly 15 dairy societies in Ambegaon area to cater to the needs.[40]

Milk Production 'Product:

At Khed green grass is. not available and in Western side (Maval Region) veterinary centers are lacking.41 In Velhe and Junnar blocks due to lack of infrastructure facilities maintenance of milch animals is a problem. Velhe and Junnar being hilly regions pose acute problems of water and grazing land.42 However, there is no shortage of natural or arti_cial feed in Ambegaon, Baramati, Daund and Indapur blocks. In Ambegaon for grazing purpose separate green grass land is allotted by village

there is lot of scope for variety of business/service.

Scope for New Activities:

In Tambe one of the VIWs observed that there is scope only for agriculture and allied sector. He observed that 70% are interested in bullock pair, 20% in buffalo and 10% in sheep/goats. Hardly, 2/3% are taking IRDP benefit for improving land.[49] For Khed block EO IRDP suggested that there is scope for training for electrical repair work, making of file boards and file rappers and also making paper boxes by a group of ladies having ten people. There is also scope for preparing female under garments in Khed Area.[50]

In brief, except in plain areas at Khed and Ambegaon there is no scope for business and service activities. in remote tribal areas. for agriculture and allied activities tribal beneficiaries are obtaining help through IRDP. In Ambegaon, poultry programme run on co-operative basis. Tribal women are provided this scheme (with 70 women) under cluster approach. Since there is a society to market eggs, they are doing well. [51]

To sum up, this study makes it clear that there is scope only for small

industries in agriculture and allied sectors in tribal areas of Pune district. There is scope for activities like EMP repair, bee keeping and furniture making. pickle unit. Oil ghani, papad making (by using natchani) can be started exclusively for women.

Review of Performance:

DRDA being an administrative agency and not an executive one, totally depends upon the executive agencies particularly at block and below block level for implementing IRDP. Obviously, there are a number of control points. There is also in built mechanism through which coordination and control can be effectively exercised. For this purpose, at the district level, there is a District Consultative Committee (DCC) having District Collector as its Chairman. All the banks and the District level Officers of the Government, NABARD, DRDA are the members of this Committee. The main business of this Committee is to allocate share of work to various banks, monitoring and reviewing the overall progress in physical and financial terms, ironing out inter-agencies differences and prepare items for consideration to the State Level Coordination Committee. In the capacity as Chairman, the Collector review's the performance of bankers regarding" the, completion of financial targets fixed for them and helps to find out solutions to the problems faced by BDOs and banks in sanctioning the loan proposals. Since bankers are outside the bureaucracy through this mechanism/authority is exercised by: the Head of the District. Similarly, the Chief Executive Officer, Pune under

whom BDOs work review the performance of BDOs in the monthly meetings. This provides as a forum to the BDOs to exchange their experience regarding common problems encountered in implementing IRDP in the District. The performance of field staff i.e. Extension Officers and VLWs are reviewed by the BDOs of the block concerned. However, *it* should be remembered that EOs' performance is also reviewed by the' Project Director IRDP in monthly meetings.

Performance Rating :

Performance Rating of EOs by the B.D.0.5 and the Director, DRDA point out that B.D.O.s by and large - who are responsible for getting the work done through EOs - are understandably more sympathetic towards their subordinates 52 than the Directors, who is an outsider to the block.

In District Consultative Committee meetings, most of the problems are ironed out as different agencies concerned with IRDP are represented in the Committee. Till this date there is no complaint on record regarding the functioning of this Committee in the Annual Reports published by DRDA. However, the Project Director, DRDA Pune, pointed out that the performance of IRDP, Pune is not evaluated till this date with a view to ensure its effectiveness. He further added that evaluation should be done because by this method, defects can be rectified and solutions introduced make the programme an effective one. Otherwise, evaluation done after a long time becomes a sort of postmortem, the outcome of which will be of no use as it becomes outdated.[53]

APPRAISAL:

Up till now we have analyzed planning, implementation & evaluation of IRDP in Pune District in general and tribal blocks in particular. The analysis point out many defects right from the stage of survey of potential beneficiaries, problems in scrutiny of applications, deciding and purchasing the assets and follow up. However, it should be borne in mind that the bureaucratic lapses noticed are not new. For the last 50 years same mistakes are repeated while planning and implementing poverty alleviation programmes. The crucial question is why is it so? Though there are structural changes in bureaucracy, it seems that behavioral changes to the extent expected did not take place in planning and implementing development programmes. The callous approach of bureaucracy towards problems of national development particularly at the level of implementation and the attitude of. beneficiaries that developmental efforts are the "gifts from the government" and the concomitant, parasitic attitude, politicians efforts to create vote banks which encourages irresponsibility among the people

at large culminated in the failure of the IRDP programme to a large extent. On the bases of information and data one can surmise that at least 15-20 percent of benefits were grabbed by those who are above poverty line and another 15-20 percent assets were sqld out for one reason are the other. Similarly, on a conservative estimate at least 1 O-_ 2% of assets were mishandled due to lack of "know how". In other words, hardly 50 percent of the benefits under IRDP helped the poor to cross the poverty line. ,If the bureaucracy at the level of implementation, was trained in the ethos of development administration and properly motivated and directed, supervised and control. the programme would have been a great success. In addition to this, the study point out the need for streamlining the programme and coordinating the same both horizontally and vertically in the administrative set up. In brief, there is an urgent need for introspection at the policy and programme making and implementation level with respect to possible repercussions of the programmes on Hie beneficiaries as well as those who are not entitled for the benefits/people at large.

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# EVALUATION OF BEEKEEPING PROGRAM FOR TRAINED MADIA'S

* Sonali A. Taprel and P. O. Ingle

## INTRODUCTION

Apiculture provides supplementary income to large number of rural, hilly and tribal population in Maharashtra. It is reported that in India annually 4, 529 metric tonnes of honey, valued at Rs. 216.3 millions is produced. It increases crop production to the tune of 10 to 25 per cent by effecting cross pollination (Brar et al., 1992). Rock bee species *(Apis dorsata)* is highest honey producer, which is found mainly in the forest on trees and rocks. Honey from it is gathered by Tribals and adventures people on a large scale (Kamal Taori and Chakravarty,1994). Apiculture is feasible because of rich flora available in abundance quantity in the rural area. (Brar *et al..):* In future bee keeping and subsidiary occupation has large scope for tribals, if they are provided with required knowledge has technology in this regard. Owing to the importance and magnitude of bee keeping for tribal population it was considered necessary to undertaken study in this regard with the following objectives.

## OBJECTIVES

1) To study the knowledge and adoption of improved package of beekeeping practices by the tribal beekeepers.

2) To study the socio-economics benefits received by Tribal beekeepers from beekeeping vocation.

## METHODOLOGY

The present study was conducted in Dhanora and Kurkheda Panchayat Samiti of Gadchiroli district of Maharashtra State. In all, 35 Madia beekeepers from four villages were purposively selected. These villages have relatively more population of tribal beekeepers. All the 35 beekeepers who had attended training programme at 'Amhi Amchya Arogyasathi Society a NGO promoting Apiculture in Tribal area, were student for their knowledge and adoption levels about recommended practices. Findings.

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1) Practicewise knowledge of Bee keeping

Table 1.

Distribution of tribal respondent beekeepers according to practicewise knowledge

| Sr.No. | Package of practices of beekeeping | Respondents | |
|---|---|---|---|
| | | No | % |
| 1. | Use of protective uniform and required equipment for handling of honey bees | 35 | 100.00 |
| 2. | Selection of time for going in forest for honey extraction. | 35 | 100.00 |
| 3. | Smoking of honeycomb by smoker or push a curtain of bees for fly around the nest | 30 | 85.71 |
| 4. | Careful testing of the comb for ripening of honey | 29 | 82.85 |
| 5. | Skillful cutting of honey comb for collection of honey on tree | 20 | 57.14 |
| 6. | Filtration of honey | 21 | 60.00 |
| 7. | Extraction of wax | 22 | 62.00 |
| 8. | Storage of honey | 17 | 48.57 |
| 9. | Capturing and transportation of honey bees (wild rock bee species) by fixing bamboo clip or tying frame on trees | 21 | 60.00 |
| 10. | Type disturbed queencells or whole honey comb at the same place for next harvest | 29 | 82.85 |
| 11. | Precaution to be taken after honey harvest | 26 | 74.28 |

It is observed from Table 1 that almost all (100%) tribal respondent possessed knowledge about use of protective uniform and required equipment for handling of honeybees as well as selection of time for going in forest for honey collection, followed by 82.85 percent respondent, who know the process of pushing curtain of bees 85.75 percent of respondents know about tests for ripe or unripe honey as well as about tying of honey comb on same place for next harvesting. 74.28 percent respondents-know about the post harvest honey.

Thus, it was inferred that majority of trained tribal respondents beekeepers possessed knowledge about most of the improved practices of bee keeping.

Practice wise adoption

Table 2.

Distribution of non tribal respondent beekeepers according to practice wise adoption.

| Sr. No | Package of practices of bee keeping | Complete adoption | | Partial adoption | | Non adoption | |
|---|---|---|---|---|---|---|---|
| | | No | % | No | % | No | % |
| 1. | Use of protective uniform and required equipment for handling of honey bees | 35 | 100.00 | 0.00 | 0 | 0 | 0 |
| 2. | Selection of time for going in forest for honey extraction. | 35 | 100.00 | 0 | 0.00 | 0 | 0.00 |
| 3. | Smoking of honeycomb by smoker or push a curtain of bees for fly around the nest | 30 | 85.71 | 5 | 14.28 | 0 | 0 |
| 4. | Careful testing of the comb for ripped honey | 0.00 | 0.00 | 29 | 82.85 | 6 | 17.14 |
| 5. | Taking precautions while cutting honey comb at three fourth quantity of ripe honey filled along the top the comb | 0.00 | 0.00 | 21 | 60.00 | 14 | 40.00 |
| 6. | Skillful cutting of honey comb for collection of honey on tree | 5 | 14.28 | 10 | 28.27 | 20 | 57.14 |
| 7. | Filtration of honey | 13 | 37.14 | 6 | 1714 | 16 | 4.30 |
| 8. | Extraction of wax | 4 | 11.42 | 17 | 48.52 | 14 | 40.00 |
| 9. | Storage of honey | 4 | 11.42 | 11 | 31.42 | 20 | 57.14 |
| 10. | Capturing and transportation of honey bees by fixing bamboo clip or typing on trees | 15 | 42.82 | 4 | 11.14 | 16 | 45.71 |
| 11 | Tying the disturbed queen cells or whole honeycomb on same place for next harvest | 20 | 57.14 | 7 | 20.00 | 8 | 22.85 |
| 12 | Post harvest precautions | 22 | 62.85 | 4 | 11.42 | 9 | 25.71 |

It was observed from the Table 2 that all the Tribal respondent beekeepers adopted protective uniform and used required equipment for handling of bees and as well as followed recommended time for extraction of honey. Majority of the respondents (85.71 %) adopted a practice of pushing curtain of bees as per recommendation. Nearly two third of the respondents (62.850/0) of followed precautions to be followed after honey harvest and 57.14 per cent adopting recommended method of tying. honey comb on same place for next harvest. It was interesting that none of the respondent was found to adopt completely, the practices of testing the comb for ripped honey as well as proper removing of honey comb.

Benefits received

Under the head of social benefits 97.14 per cent beekeepers received co-operation of villagers, 91.42 percent beekeeper developed social contacts while 62.85 percent Tribal beekeepers received honey for family consumption as well as got employment and nearly three fourth *(74.29%)* of them received Rs. 5000 to 10000 net profit per annum.

Constraints:

Amongst situational constraints faced by tribal bee keepers uncomfortable or uniform provided by training institute. Inadequate labour at the time of honey flow period, were the major constraints expressed by all 51.72 per cent and 62.85 percent respondent bee keepers expressed competition between the groups of villagers for honey collection. Lack of knowledge about storage of honey (48.570/0) and cutting of bulk honey (57.14%) were also important constraints faced by tribal beekeepers.

It was concluded that adoption of bee keeping recommended practices by tribal was moderate therefore personnel of the training center, subject matter specialists working in the tribal area should make efforts to improved traveling program to impart practical knowledge and technology about bee keeping to the tribal. Constraints analysis could led to conclude that majority of the tribal farmers feel uncomfortable while using the uniform hence more research is needed in this regard.

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# TRIBALS WITH ECO-FRIENDLY VILLAGE INDUSTRY AND SUSTAINABLE DEVELOPMENT

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## INTRODUCTION

Our objective to study the gramodhyog units, is to understand the way of achieving equitable and sustainable development. Our approach is a reorientation of development in favour of the tribals and their own view of their needs, problems and alternatives *for* their resolution. This approach is just like a participatory process in development [Mathur: 1997:53]. During our field survey an effort was made to locate a place where we could observe a development process which empowers people to take greater control over their lives, to determine priorities and take action to meet their own needs, as well as to work together towards their fulfillment. Concurrently the ethics of eco-friendly village industry could be discovered in full operation and, beneficial working. This was found in village Dagocha, in Panchayat Samiti Salumber, of Udaipur District of Rajasthan State.

Salumber Panchayat Samiti proved to be a land mark *for* our intensive study. It is the village Dagocha where we focused more intensively. We could observe the working units of gramodhyog. The history of spontaneous initiative by the people themselves and outside stimulation, the socio-cultural context of the gramodhyog and sustainability, forced us to deal the case of that village in more details.

## VILLAGE DAGOCHA : A SOCIAL PROFILE:

Village Dagocha is located in the south part of Salumber (District Udaipur), at a distance of 30 Kms, on the bank of a river named Jakham, the other bank of the river being owned by Dungarpur district. The land of the village is fertile but it is hilly. This village is not a habitat unit like other villages of plains. The scattered hmelets present a resemblance with the tribal features of southern Rajasthan. In all there are 90 families in the village. They belong to Scheduled Castes Meghwals, and Scheduled Tribe - Meenas. This village is a part of village panchayat Amalva. Ward No.9 of the Gram Panchayat Amalva is located at Dagocha village. Holi Ram a tribal beneficiary is the public representative in local self-government, i.e., he was elected from Ward No.9, Dagocha.

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Education facility up to 5th standard is available here. It is a Government School, and two teachers, namely, Babulal Meena,B.A., B.Ed and Nathu Lal Meena Hr. See, STC, are working on full time basis. There are two fully constructed rooms with a verandah. Total 90 students were enrolled from class I to V during 2001-2002 session. Both the teachers live at Lohagarh village about 4 Kms. From Dagocha.

If we apply present parameters of social development then we may put this village in the category of undeveloped village. The obvious reason is that the village is not connected with Kutcha-pucca road. The approach is very difficult. For about 15 Kms. from Bhabhrana there is merely a stoney track. Somehow one may travel by a motorbike or by a powerful jeep. Mini trucks like 407 may also reach near the village in dry weather. Dagocha is not electrified. There are four hand pumps in the village territory. One hand pump is, however, saline. The remaining three hand pumps at different places are the main source of drinking water. There is no facility regarding health care. Sick persons are carried to Bhabhrana by a cot with the help of four persons. *A general perception about Dagocha is that the inhabitants are self-reliant. They live with the nature. They produce at their own level and manage their needs at their own.*

FIBER INDUSTRY:

Fibre industry is one of the gramodhyogs under the group of agro-based industry. The raw material to run this gramodhyog is obtained through agriculture. The major equipment is a technical fibre machine which can be operated by male, female, young or old irrespective of sex and family bindings. In Rajasthan State fibre industry may be found in abundance in Alwar, Bharatpur, Dausa and Nagore. Its occurrence is casual in Udaipur district. Some relevant data regarding fibre gramodhyog in Rajasthan has been obtained from KVIB, Jaipur, and is being presented in the table ahead.

Gramodhvog in Rajasthan: A Scenerio of Fibre Industry

| Year | Number of Units | Production (Rs.in Lakhs) | Sale (Rs. in Lakhs) | Employment |
|---|---|---|---|---|
| 1998-1999 | 13009 | 2522.49 | 3969.00 | 20876 |
| 1999-2000 | 13021 | 2538.21 | 4072.70 | 19585 |
| 2000-2001 | 13033 | 2392.17 | 3838.98 | 18470 |

THE CASE OF DAGOCHA : SOCIAL ACTORS:

Every success story of development has a strong base which includes, social actors at the local and external levels. The central actors in a development process at the the village level are, of course, the people themselves. They need motivation and incentive at the initial stage.

In case of Dagocha two

persons from tribal community - Bhera and Jeewala - are known as pioneers in fibre industry. Both of them. are the social actors to initiate the development process at local village level. They are social actors at local level that way.

Regarding social actor at external level we may talk about Government agencies. In the decades following independence, Government has emerged as the initiator, executor and arbiter of all development. The assumption has been that the prime mover of development is the Government, rather than the people themselves.

In case of Dagocha, when we deal with fiber industry, we should keep in mind that an innovative process of development rearly occurs as a spontaneous initiative by the people themselves. They needed to be stimulated and assisted by some one from outside. The villagers of Dagocha reported to us, during an information interaction, that a supervisor - Mohan Lal - came from KVIB, Jaipur to Dagocha with the then local supervisor. The interaction between external social actor - Mohanlal - and the local social actors Bhera and Jeewala, was managed through District Industries Centre, Udaipur (Khadi). DIC (Khadi) is the executive body of State KVIB. Thus the interaction between local social actors and external social actors took place through proper channel.

Bhera and Jeewala had been trained in the year 1986-87. In the training programme the organizers introduced the fibre machine to them and gave deep knowledge about various parts and functioning aspects. Bhera and Jeewala became fully skilled persons, who could operate fibre machine at their own freely.

Dagocha village has been considered for financial assistance in Gramodhyog sector since 1978-79. Up to the year 1996 the individual beneficiaries were 56. Out of these 40 were provided loan with subsidy for fibre industry. We observed that fibre industry suitedthe tribals, and that is the reason that tribals took to this industry in Dagocha.

CULTURE ORIENTED OCCUPATION

Fiber industry in Dagocha is enough evidence to support the assumption that tribal people prefer only those occupations which are culture oriented. Tribals of Dagocha, like others, in the past earned their livelihood from forest, forest produce and game. At a later stage they adopted a settled way of life and practised agriculture.

Culture oriented occupation may be observed with other tribes of country which are isolated and still continue to live in the remote inaccessible forest areas, whose major economic activities are hunting, fishing and collection of roots, tubers, fruits, etc. in the forest [Debashish : 1998 : 108]. In the case of tribals in Salumber Panchayat Samiti, those who live in the islands of Jaisamand lake and nearby places, are involved in fishing activities and hunting, and others in agriculture and allied occupations.

Basically tribals ofDagocha village are small and marginal farmers. By the passage of time, the implications of British policy of commercial forestry, after the attainment of independence, the national forest policy, policy recommended by the National Commission of Agriculture in 1976, National Forest Policy on Environment and Population and finally the participatory forest management policy, have shattered the tradition of culture oriented occupation among tribals. However, tribals of Dagocha village are moving ahead towards their culture oriented occupation with resilience.

DAGOCHA : A CENTRE FOR FIBRE PRODUCTION:

Fibre production is a part of agro-based gramodhyog. We have already narrated the significant incidents to encourage this gramodhyog as culture oriented occupation adopted by the tribal inhabitants of Dagocha. Now it is turn to deal with the whole process of this activity. We may take availability of raw material, processing and marketing of the finished goods.

FIBER MACHINE:

Fiber machine is not complex. It is very simple. Only human legs may run the machine. It consists of a few parts. Every common tribal young or old, male or female have a perfect knowledge of the structure of the fibre machine in the village. No extra power, other than human, is required to operate it. One can operate it with the help of a pedal. Structural parts are very simple. They need merely machine oil or grease is used as a lubricant for smooth operation. Technically such machine does not experience sickness. Sometimes there is a need to replace the shaft and pulley. Genuine parts are not available in townships because the machine is brought from Jullandhar (Punjab) through KVIC's certified unit. Fibre machine may be called as a boon for the inhabitants of Dagocha.

PROCESSING NETWORK:

Fibre industry, under agro-based industry, requires a little investment at the initial stage. In the beginning mainly the fibre machine is to be purchased. That is the burden of KVIB. During the year 198283 and later a large number of machines were provided to the villagers in the Panchayat Samiti, Salumber. The owners used these machines for some time and then abandoned. An interesting point to note is that during our interaction with the tribal people in Dagocha - Keshu, Bavaria, Megha, Rodiya, Holiram etc., they narrated the real happening.

According to the narration, the fibre machines which were provided by KYIB to the individuals in the nearby villages - were sold to others. 53 families from Dagocha also purchased those second hand machines. At present they are operating the second hand machines, although they have their older machines also. The reason reported by them is that

they are really operating the machines while others were not using them at all. They feel convinient to have more than one machine. All the members of the family may 'be engaged in the same occupation. So to say *more machines, more manpower, more production and consequently more profit.*

RAW MATERIAL:

Fibre machine requires only one item as raw material, i.e. hemp fibre. Hemp is an agricultural product usell for making rope. In Dagocha hemp is not sown in the fields. When we asked about the sources of hemp it was reported that it is brought from Fatehnagar market. Jointly 8-10 members purchase from Fatehnagar and bring it in a hired truck 407. They have to pay about Rs. 1400 as freight. Hemp is available for about Rs. 1300-1500 per quintal. One truck load may carry 22 quintals of hemp. Each family consumes 2-3 quintals raw material in 1-2 months. To save transportation expenditure some farmers tried to take a crop of hemp in Dagocha itself, but the yield was very low. Due to very low yield they preferred to purchase raw material from the market. Calculation of cost of production shows wisdom of the tribals. It seems they are no more backward in agro-based business.

Raw material hemp is prepared for fiber machine by way of spraying little water over it than after pounding it at a strong stable, vertical wooden pillar. This work is assigned to the youngsters.

PROCESSING:

After pounding for some time the hemp is put at fiber machine for processing. There are two channels where two hemp fibers are put simultaneously. Applying padal both fibers are spinned. A single rope about half centimeter radius is formed. Machine contains two dies and thus rope with two fibres is prepared. Processing also is simple, and therefore, every member of the family may operate it.

MARKETING:

When the rope bundles are prepared, these are ready for sale. Each bundle is about 2 to 3 Kg. Well organized market infrastructure is not available for the tribals. Mainly there are three ways for marketing as reported by the respondents: (1) They put a few bundles on their heads and walk to nearby villages. This is a casual way; (2) They hire a mini-truck - 407 jointly for weekly market Vijwamataevery Sunday; (the weekly market (Hatt) is a regular way of marketing; and (3) occasional fairs also are held at nearby places. The largest fair is 'Beneshwar Mela'. On occasions of fairs, they jointly hire the mini-truck-407, and carry the ropes for sale.

The economics of arranging raw-material, processing, producing finished goods, marketing and finally profit earning is very simple. Our respondents reported that they sell rope bundles @ Rs. 8090 each.

That way they earn @ Rs. 40-50 per bundle. They are satisfied with this much of profit.

The sociology of this gramodhyog is also very simple. Family as a unit is involved in the whole process. At village level we observed the whole village as a production center. Not only that, even the arrangement of raw material and marketing jointly is a unique feature related to this industry in this village in particular. *The notable feature of the whole process is that, no energy* or *power, of any kind, is required. Hence, no question of excrition material arises. The required raw material is a part of agricultural crop. Therefore, no harm to the forest. Certainly the eco-friendly industry should* be *encouraged to withstand the vagaries of globalization and economic liberalization.*

In the name of development Dagocha needs special attention. Quality of life is very poor, infrastructure is inadequate, no road, inadequacy of drinking water facility. No electricity, no health care center, no communication facility and nothing modern. When we talk about civil society, modern and post-modern society, where is the place for Dagocha?

The only scope on the basis of our study remains is to execute cluster development programme with participatory development approach for the tribal inhabitants of villages like Dagocha, and this only can create an eco-friendly milieu to accelerate sustainable development.

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# CHANGE, MUST AMONG THE TRIBALS

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## INTRODUCTION

India is a welfare state committed to the welfare and development of the people in general and of vulnerable sections in particular. The preamble to the constitution lays down the nation's commitment to provide security for all citizens, justice, liberty, equality and fraternity. Article 46 of the Constitution lays down that the State shall promote with special care the educational and economic interests of the weaker sections of the people and in particular of the Scheduled Tribes and shall protect them from social injustice and all forms of exploitation. The Directive Principles of State Policy envisage a very effective role for the State in the welfare of the Scheduled Castes, Scheduled Tribes and other disadvantaged and marginalised group of society. The State has always been conscious of the desired nexus between economic growth and socio-economic justice to the weaker sections of the society, and during the entire planning era has been made that while the economy develops and grows as fast at the same time special efforts are made for the uplift of the weaker section of society to enable them to march forward educationally and economically. As a matter of strategy the Government of India has resorted to planned development for minimizing inequality in income status and opportunities for its people.

The statutory list of Scheduled Tribes and Scheduled Castes are notified in pursuance of articles 341 and 341 of the constitution. The list of Scheduled Tribes was notified for the first time under the Constitution Order, 1950. This list of Scheduled Tribes has been modified or amended or supplemented from time to time. On the recognition of the states, the Scheduled Tribes list (modification order) came into force from 19th October, 1956. There after, a few orders specifying Scheduled Tribes in respect of a few individual states also came into force.

## TRIBAL PROBLEMS

The Indian Tribes at present suffer from mainly two types of problems. Firstly, those which are also found in other people of the country and Secondly, those which are peculiar to tribal people. In this latter type of Tribal problems the following are the most important.

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1. Cultural Problems:

Due to contact with other cultures, the Tribal culture is undergoing a revolutionary change. Due to the influence of Christian missionaries, the problems of bilingualism have developed which has led to indifference towards Tribal language. The Tribal people are imitating Western culture in different aspects of their social life and leaving their own culture. An important influence culture contact is seen in the form of disappearance of youth dormitories. Imitation of the Western dress and modes of living has led to the degeneration of tribal life and tribal arts, such as dance, music and different types of crafts.

2. Religious Problems:

Due to the conversion of many Tribals, Tribal people to Hindu and Christian religions, the Tribal groups have been divided into several sects on the basis of religion. This has shattered their collection of life and conflicts and dissentions are increasing. The Tribal people are gradually forgetting their Tribal religion. This has led to social disorganization.

3. Social Problems:

Due to the influence of Hindu Communities the Tribes are facing the problems of increasing dowry. Another social problem created by he Tribal contact with Hindus is the evil custom of child marriage. The contact with the civilized society has increased the number of premarital and extramarital sexual relationships in Tribal society and the number of dissolution of marriages. This has also increased the incidence of prostitution and venereal diseases.

4. Economic Problems:

The contact with the civilized world bas disintegrated the entire economic system of the Tribal people. They have forgotten their ancient crafts, most of them are working as labourers in plantation, agricultural farms, factories and other jobs. The employees every where misuse the ignorance of the Tribal people, take maximum work from them and give them minimum money in return.

TRIBAL WELFARE

Thus, it is clear that the Indian Constitution has made important provision for the welfare of Tribal people. Posts have been reserved for them in public services in States and Center.

Seats have been reserved for their representatives in the Legislatures of different states and in the Indian Parliament. Special provisions have been made regarding their administration. District and regional councils have been established to carry out their welfare, the Government have given special attention to their education and economic development. This has not

appreciably improved the condition of tribal people. The following suggestions can be made in connection with tribal welfare.

1. Economic Reforms:

Efforts should be made to encourage Tribal people to permanently establish for cultivation, because the shifting cultivation practiced by them result wastage. The co-operative forests utilization societies can help the Tribals in utilizing the forest in which they live. The Government should arrange for crafts and provisions should be strictly imposed in Tribal areas to solve the problems of indebtedness and to restrict exploitation. Co-operative credit societies can be organized to provide money for small scale industries. Labour laws should be strictly enforced in Tribal areas.

2. Educational Reforms :

At the base of the fallen state of Tribal society is their widespread illiteracy. Educational expansion, therefore, should be given primary consideration, the Tribal education should be given through their own language and in their own cultural background. Colleges should be established to safeguard the tribal fine arts. Provision should be made for technical and commercial education in the Tribes. Along with education the Tribal music J dance, plays and recreation should be encouraged. Religious dogmatism and superstitions should be removed through scientific education.

3. Health Reforms:

Efforts should be made to improve the level of health of Tribal people. This will require provision of medicines, pure water, nutritive food, clean and properly ventilated houses and generally healthy atmosphere.

4. Social Reforms :

Whatever money be the opposition form certain vested interests, efforts to carry out social reforms in Tribal must be realized. The evil customs of bride price or dowry, magic and ritualize, child marriage, prostitution etc. should be removed. These social reforms can be carried out only after economic reforms.

5. Political Reforms:

It is a pity that the government officials posted in Tribal areas misuse the ignorance of Tribal people and exploit these for different purposes. They scorn the tribal culture and are completely indifferent their welfare. The government should appoint such officials as are conversant with tribal culture and intend to improve the condition of tribal people.

CONSTITUTIONAL SAFEGUARDS:

The Indian Constitution prescribes protection and safeguards for the Scheduled Tribes, and other backward classes either specially or by way of

insisting on their general rights as citizens with the object of promoting their educational and economic interests and of removing the social disabilities. The chief safeguards as follows :

i) The promotion of their educational and economic interests and their protection from social injustice and all forms of exploitation (Art.46),

ii) The throwing open by law of Hindu religious institutions of a public character to all classes and section of Hindus (Art.25),

iii) The removal of any disability, liability restriction of condition with regard to access to shops, public restaurants, hotels and places .of public entertainment or the use of wells, tanks,. bathing ghats roads and places of public resort maintained wholly or partly out of state funds of dedicated to the use of the general public(Art.14)

iv) The curtailment by law, in the interests of any Scheduled Tribes to settle in acquire property (Art.19)(5);

v) The forbidding of any denial of admission to educational instructions maintained by the state of receiving and out of state funds (Art.29),

vi) Permitting the state to make reservation of the backward classes in public services in case of inadequate representation and requiring the state to consider the claims of the Scheduled Tribes in the making of appointment to public services (Art 16 &: 335).

vii) Special representation in the Lok. Sabha and the State Vidhan sabhas to Scheduled Tribes (Art .330,332and 334);

viii) The setting up of Tribal advisory councils and separate departments in the states and the appointment of a special officer at the centre to promote their welfare and safeguard their interests (Art.164 and 338and fifth schedule);

Ix) Special provision for the administration and control of Scheduled Tribes and Tribal areas (Arts .244and fifth and sixth schedules);

x) Prohibition of traffic in human beings and forced labor (Art.23)

CHANGING SENARIO AMONG TRIBALS :

In free India the State and Central Government have made incessant efforts in the direction of Tribal welfare. At the Central level a commissioner attached to Home ministry takes care and Tribal welfare. Several District and Regional Councils have established for Tribal welfare. Tribal Research Institute for the study of Tribal Culture and language are working in many states. Efforts are being made to expand educational facilities in Tribal areas. Thousand of Scholarships have been made for special seats for Tribal people in medical, engineering and technical colleges.

Posts have been reserved for them in public services. Primary and secondary schools have been established in Tribal areas where there is a provision for free education.

In the political field the Tribes send their representatives to state and Central Legislatures, same of whom have risen to the rank of Deputy Ministers and Ministers. Some Tribal youths qualify in All India Services and their number is gradually increasing.

For the economic regeneration of the Tribes, the government has enforced rules regarding land ownership and utilization of land. Crores of rupees have been spent for the development of cottage industries. The community projects have been established everywhere. Grain shops have been opened which provide improved many types of seeds. Laws in connection with debt have been enforced. Special multipurpose Tribal blocks have been created. Shifting cultivation is restricted and Tribal families have been made to settle permanently on suitable land. Efforts have been made to provide housing facilities in some Tribal areas. Hospitals have been opened which provide free medicines, check epidemics and cure all types of diseases. Research Institutes have been opened for the study of Tribal culture and language. New roads have been made and old roads improved in the training for this purpose. Institutes for their training have been established in many states.

CONCLUSION:

The above brief outline of the state and central Government efforts in the direction of tribal welfare show the extent of work that has been done in different Five Year Plans. This has definitely lead to some improvement in some directions. The solution or tribal problems however required a multi-sided planning. Many changes have been taken place among Scheduled Tribes in a slow but steady way. The Indian Constitution has made several provisions and the central and state governments have been implementing numerous welfare schemes. By following modern life style Schedule Tribes are improving their living conditions in all spheres. Even though still there must be a change among the tribals' social life.

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# TRIBAL WOMEN WORK FORCE IN AGRICULTURE

* Dr. Sunil Goyal ** Ms. Sangeeta Goyal

## INTRODUCTION

In most of the developing countries though the emphasis is on industrialization, the agriculture continues to be the main source of livelihood by offering work to most of the people in these countries. The participation of women in agriculture and allied activities is no way insignificant in these countries. The Policies of the planners have aimed at improving more of agricultural practices under High Yielding Variety Programme and Green revolution and very little attention has been paid to the problems of women in this sector. Often it is found that women have not been given their due share and status even in the field of agriculture where their contribution is considerably high.

The main reason for the non-recognition of the continued participation of women in agriculture could be a gender bias; wherein women are basically recognized as housewives whatever occupation they are engaged in. Such distortion in understanding would not only hinder in having a realistic picture of rural women and their problems, but also becomes an impediment in understanding the problems of rural work force.

The population of India as per 1991 census is 836,605,522 of which 402,813,817 are females who roughly constituted 48 per cent. About 75 percent of the female population are form rural families, who belonged to the small and marginal farmers and landless agricultural labourers. In Madhya Pradesh, according to the census of 1991, women constituted about 32 million (48 percent) out of a total population of 66 millions. In Madhya Pradesh about 7.2 million women workers are present, out of which 6.5 million (90 percent) live in rural areas and rest of the 0.7 million (10 percent) in urban areas. 87 percent of the women in rural areas are engaged in agriculture, while 3.76 percent in house hold industry and 9.32 percent as workers in other occupations. These figures significantly show that agriculture is the main occupation to women in rural areas in India.

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Women contribute substantially to the economy, forming a quarter of the productive work force. It is observed that one woman is at work for every three men and one out of three adult women is a productive worker. The participation ratio of women in agricultural activities is found to be higher in areas where peasant communities dominate, self cultivation is practiced among the landless (Beteille, 1974). Since more number of women are taking part in farm work and allied activities, it is of a greater importance to study the participation of these women in work activity.

Madhya Pradesh, among several other states in India, is considered as one of the progressive agricultural areas where we find a considerable number of women folk participating in agricultural activities. The present study is confined to the participation of women in two villages, viz.,

(1) Ghodadongri .and

(2) Shahpur in Tribal District Betul in Madhya Pradesh which are predominantly agricultural in nature.

The data were collected from two villages, which are panchayat head quarters. A sample of 96 households representing 10 percent of the total households was selected on the basis of proportion to the number of households in each category of land holding size, so as to represent all the sections of the village.

The data were collected with the help of an interview schedule. The sample frame consists of 519 respondents of which 265 are males and 254 females.

OBJECTIVES

The specific objectives of the study are :

1. To find out the extent of participation of women in work force:
2. To study the relationship between land holding size and participation of women in work activity; and
3. To identify the factors associated with the women workers' participation.

Women labour force constitutes a majority in the total agricultural labour force in Betul District. The household size varied with the land size category. It was least (5.0) among the landless households and highest (7.7 ) among the large land holding category. Based on the social background the average household size was lowest (5.2) in the Scheduled Castes. It was 6.3 for the lower caste Hindus mainly consisting of cultivating and artisan groups. By occupational categories, artisans had on an average large household size (7.2), followed by owner cultivation (6.3). The salaried and

the business class had a small (4.6) household size.

The total labour force participation rates in the sample villages in 1991 was 41.7 percent. The participation rate for women was 13.9 percent and for men 27.8 percent in the sample villages. In the sample villages the percentage of women agricultural labourers was 8.7 percent where as men constitute 8.6 percent.

The Work Force Participation Rate

The sample population has a total of 312 workers, of which 180 (57.69) were males and 132 (42.31) females. While the workers participation rate has gone up for both the sexes in the villages under study , the increase of men in work force was marginal ,women workers participation showed significant rise over these years. The reasons for such a phenomenal growth in the women participation rate in the sample villages could be due to the expansion of employment opportunities in the area under specific schemes and / or economic necessities forcing, women members of the household to undertake gainful work and supplement the family income irrespective of their social and economic status and land ownership. Even with responsibility in the domestic work, their status has not improved as a consequence of their increased participation. The following table would amply illustrate the observation of increased participation of women in agricultural labour force (Table1).

With regard to the distribution of the sample by households and population in different landholding categories, 8.3 percent of the households were in landless category, 43.8 percent were in marginal land holding category, 39.6 percent were in small land holding and even the large land holding category had only 8.3 percent households.

In these households the percentage of men and women compared to the total population. 12.1 percent were men and 15.0 percent were women in landless category. 40.7 percent of men and 35.4 percent of women were in margina1land holding category and 13.2 percent of men and 14.6 percent of women were in large land holding category.

Table -1 :

Distribution of sample Households and population by Land Holding size

| Land Holding Size | Households | | Population | | | % of Total Population | | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. | % | M | W | T | AHH size | M | W | T |
| Landless | 8 | 8.3 | 32 | 38 | 70 | 5.0 | 12.1 | 12.1 | 13.5 |
| Marginal | 42 | 43.8 | 108 | 90 | 198 | 5.6 | 40.7 | 35.4 | 38.1 |
| Small | 38 | 39.6 | 90 | 89 | 179 | 5.7 | 34.0 | 35.0 | 34.0 |
| Large | 8 | 8.3 | 35 | 37 | 72 | 7.7 | 13.2 | 14.6 | 13.9 |
| Total | 96 | 100 | 265 | 254 | 518 | 5.8 | 100 | 100 | 100 |

M = Men ; W = Women ; T = Total ; AHH = Average Household

PARTICIPATION BY OCCUPATION GROUPS

The table 2 shows the participation of women and men based on the occupational groups in work force.

By occupational groups, the women participation rate was higher ( 54.3 percent) for households belonging to share croppers - cum -tenants category. The men participation ( 44.2 percent) was equally high in this occupational group. Among the owner cultivators as well as the salaried and business group the women participation was very low as it was 22.8 percent in the former category while it was 13.8 percent in the later category. The artisans had the lowest (9.1 percent) women participation rate. But the men participation in all these three occupational groups was considerably high. This is an indication of the high dependency of the household members on the men earners in these categories.

The reasons are not far to seek. The high women participation in the share - croppers group and the low participation in the other three occupational groups could be due to the resources owned by the respective groups. The poor resources base in the farmer group necessitated the larger number of persons to seek work, which-involves more number of women; the later group possessing resources could earn sufficient means without involving the women in the work force. The low participation rate for the artisans group in particular could also be attributed to the absence of infrastructural facilities including marketing of the products in the area.

The sample village had a large percentage of women workers, consequently the participation rate was very high. In the past one and a half decades the women participation in work activity has increased to a very great extent and the increase has been mainly in agricultural and allied sectors.

The women participation was found to be high among the households dependent on agricultural pursuits and a large proportion of women were found at work among the small and marginal farmers as compared to large farmers. Though the women have been participating in various types of work activities, of which agriculture has been the potential area which provided work for women.

Table - 2 :

Occupational Group

| Characteristics | Households | | Population | | | % of Total Population | | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. | % | M | W | T | AHH size | M | W | T |
| Owner Cultivators | 21 | 25.0 | 65 | 58 | 123 | 6.3 | 24.5 | 22.8 | 23.7 |
| Share croppers cum - tenants | 46 | 47.9 | 117 | 138 | 255 | 5.6 | 44.2 | 54.3 | 49.1 |

| Characteristics | Households | | Population | | | % of Total Population | | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. | % | M | W | T | AHH size | M | W | T |
| Artisans | 10 | 10.4 | 36 | 23 | 59 | 7.2 | 13.6 | 9.1 | 11.41 |
| Salaried & Business | 16 | 16.7 | 17 | 41 | 82 | 4.6 | 17.7 | 13.8 | 15.8 |
| Total | 96 | 100 | 235 | 266 | 519 | 5.8 | 100 | 100 | 100 |

F = Frequency; M = Mean, W = Women; T = Total; AHH = Average Household

In spite of the disadvantages that have been part of the work activity, the female participation rate in every sphere of work activity has been going up. Their participation can be improved not only in numbers but also in terms of involvement in the work activity by adopting the following suggestions.

SUGGESTIONS:

1. New and additional avenues of employment for women in agriculture should be created mindful of the vast potential of women employed in the rural areas as particularly in the agricultural sector.
2. Wage disparities particularly of the women agricultural laboures has to be addressed by strict implementation of the
   (a) Minimum wages act
   (b) Equal wages for equal work act,
   also reduction in the number of working hours for women would help the women sparing time in the addresal of domestic chores which have been constantly part of the women's familial responsibilities.
3. Government agencies which have to bear the responsibilities of implementing labour welfare policies have to take active interest in enforcing various provisions in the labour legislation related to agricultural sector. Especially in the provision of services such as child care centres, supplementary feeding and safe working conditions as also restrict the working hours so as to avoid exploitation of women.
4. In the new millennium, in the process of preparation of vision 2020a massive women's awareness programme on women's right measures to present abuse of their rights, educating women on their privileges, ensuring themselves of protection against forces which are likely to take undue advantage of their vulnerability is needed.

Challenges ahead in this Sector for better future

Having entered the new millenium one should not confine to mouthing of platitudes exhorting women to fight for their right and assert themselves. Rather concerted efforts by both men and women to work together for a better deal especially for women in the agricultural sector would be best gift mankind can offer to humankind.

Agriculture is one major economic activity in which 70 to 80 % of workforce is comprised of women. Even when their contribution is high, this sector continues to discriminate in terms

of employment and wages for women as against the men. The biggest challenge posed for the policy planners, implementers, agencies working for women upliftment and the women workforce themselves is that of securing equal payment for equal work and strict compliance with the minimum wages act as also provision of minimum supportive services to the women who have been the main contributors in the agrarian sector.

The equally important and basic challenge in the agriculture sector is that of non-recognition of women's contribution to the National economy. The census enumeration has consistently ignored the contribution of women in the unorganized sector. Hence women who function as dual workers both at home and in the agricultural sector are often included as "housewives". Such distortions in the understanding of women's contributions to the national economy can no longer be ignored if India proposes to give equal justice to all its citizens.

Over and above all this, the stiffest challenge is for the Science and Technology departments engaged in Research and Development activities. Designing and production of agricultural implements as also appropriate technology, which would gender-friendly, is the need of the hour for obvious reasons. Otherwise women would continue to be burdened with technologies and ventions which are not for them to handle. While handing such technology and implements women would have to loose valuable time and energy. For several decades these efforts by women have had a direct bearing on their health, nutritional status, making them older than their actual ages. Hence for providing a better future, instead of paying mere lip service all those who are part of policy making and the political leadership and others concerned should offer appropriate and timely solutions to the problems of women engaged in agriculture.

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# CONSTRAINTS FACED BY THE TRIBAL FARMERS IN ADOPTING IMPROVED AGRICULTURAL PRACTICES.

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INTRODUCTION:

Modern agricultural technology is sophisticated. Precise and localities- specific, requiring adequate knowledge for its on farm use. India has one of the largest concentration of tribal population in the world. Maharashtra ranks fourth in the population of tribals, which according to the census 1991, amounts to 7.31millions (9.27%) of total Maharashtra Population. The tribal population in Maharashtra is mostly concentrated in Dhule,. Nasik,Thane, Jalgaon, Raigad, Chandrapur, Nanded, Gadchiroli, Bhandara and Pune district in order of population. Nandurbaris a district (separated from Dhule district) of Maharashtra having tribal population of about 62 per cent.

It is generally observed that most of the tribals are away from the improved agricultural technologies. Agriculture is the main occupation of these peoples. It is established fact that the tribal agriculture is mostly subsistence in nature. There are manifold problems of tribals. Therefore this particular study has been planned with the specific objective: To find out the constraints in adoption of improved agricultural practices by the tribal farmers.

RESEARCH METHODOLOGY :

The present investigation was conducted in Nandurbar and Taloda tahsils of Nandurbar district of Maharashtra state in the year 1999-2000. Five villages from each tahsil. thus total ten villages were selected randomly for the study. A list of tribal farmers from these selected villages was prepared. From this list a sample of about 13 respondents was drawn, by random sampling technique.

The data were collected with the help of well-constructed interview schedule by interviewing tribal respondents personally. The data were analyzed and presented into frequency and percentage.

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RESULTS AND DISCUSSION:

An attempt was made to study the problems/constraints faced by the tribal farmers is adoption of improved agricultural practices. The data sought on constraints are presented separately under economic constraints. social constraints, technical constraints and situational constraints in Table-1.

The data in Table-1 indicates the following constraints.

I. Economic constraints:

Most of the tribal farmers reported poor economic condition (70.00 per cent); inadequate credit facilities (64.62 per cent) and high prices of chemical fertilizers and pesticides (62.31 per cent); while considerable number of them reported untimely availability of credit facilities for purchase of critical inputs (36092 per cent) as their economic constraints.

II. Social Constraints:

As regards social constraints more than fifty per cent of the tribal farmers reported language problem in communication with Agril. Department Officials (53.85 per cent); illiteracy and low educational status (50.00 per cent) as their main constraints; while considerable proportion of them reported too small land holding (30.77 per cent) and few of them reported the non-co-operation by neighbouring farmers in respect of sharing irrigation, facilities (16.92 per cent) as their social constraints.

III. Technical constraints:

With regards to technical constraints most of the tribal farmers narrated the constraints like non-availability of adequate information on improved agricultural technology (72.31 per cent); lack of knowledge about technical know-how (68.46 per cent) and n_ technology perceived as costly by them (53.85 per cent); while considerable proportion of them stated non-availability of agricultural! implements and machinery (44.62 per cent) as their technical constraints.

IV. Situational Constraints :

In case of situational constraints tribal farmers reported viz. small and fragmented land holding (30.77 percent); undulated land (26.92 per cent); lack of a roads and other communication facilities (23.85 per cent) and backwater problem of Ukaidam (13.85 per cent).

Conclusions:

From the foregoing discussion, it can be concluded that majority of the tribals had medium intensity of problems. It is necessary for the extension agencies to help the tribals in solving these problems. So there is need to conduct frequent training classes before the commencement of season in the tribal area on large scale followed by frequent follow-up programmes should be undertaken by the

extension staff of agricultural department so as to have close supervision, render timely guidance and to suggest corrective measures to the tribal farmers. To overcome the manifold problems of tribals, a special project like tribal agriculture research and development needs to be established in study area to speed-up the tribal agricultural development.

Table No. 1

Constraints Faced by the Tribal Farmers in Adoption of Improved Agricultural Practices.

| Sr.No. | Constraints | | Number (N=130) | Percent |
|---|---|---|---|---|
| I | Economic Constraints : | | | |
| | i. | Poor Economic condition | 91 | 70.00 |
| | ii. | Inadequate Credit Facilities | 84 | 64.62 |
| | iii. | High Prices of Chemical Fertilizers & Pesticides | 81 | 62.31 |
| | iv. | Untimely availability of Credit Facilities | 48 | 36.92 |
| II. | Social Constraints : | | | |
| | i. | Language Problem in Communication with Agril. Dept. Officials | 70 | 53.85 |
| | ii. | Illiteracy and Law educational status | 65 | 50.00 |
| | iii. | Too Small Land Holdings | 40 | 30.77 |
| | iv. | Non-cooperation by neighbouring farmers in respect of irrigation | 22 | 16.92 |
| III | Technical Constraints : | | | |
| | i. | Non-availability of adequate information on improved Agricultural Technology | 94 | 72.31 |
| | ii. | Lack of knowledge about Technical know-how. | 89 | 68.46 |
| | iii. | New Technology perceived as costly | 70 | 53.85 |
| | iv. | Non-availability of Agril. Implements and Machinery. | 58 | 44.62 |
| IV. | Situational Constraints | | | |
| | i. | Small and Fragmented Land holding | 40 | 30.77 |
| | ii. | Undulated Land | 35 | 26.92 |
| | iii. | Lack of Roads and Other Communi- cation Facilities | 31 | 23.85 |
| | iv. | Back Water Problem of Ukaidam | 18 | 13.85 |

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# आदिम जमातीला इतर सुधारलेल्या आदिवासीपर्यंत आणण्याचे प्रयत्न व्हावेत

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महाराष्ट्राची आर्थिक, सामाजिक समाजरचना ही तीन प्रकारामध्ये विभागली गेलेली आहे. पैकी एक समाज असा आहे की, तो उच्चशिक्षित, आर्थिकदृष्टया संपन्न व पुणे, मुंबई, नागपूर या सारख्या पुढारलेल्या शहरात स्थायिक झालेला. दुसरा समाज म्हणजे मध्यमवर्गीय समाज हा साधारणपणे शासकीय, निमशासकीय कार्यालये, बँका, निरनिराळया कंपन्या व लहान मोठया व्यवसायामध्ये स्थिरावलेला व वरीलप्रमाणेच पुढारलेल्या शहरात राहत असलेला समाज. वरील दोन्ही समाज संघटीत असल्याने निरनिराळया कारणास्तव आपल्या मागण्या पदरात पाडून घणेयासाठी ते शासनावर मोर्चा, संप, हरताळ इ.सनदशीर मार्गाने दबाव आणू शकतात. तिसरा समाज मात्र आर्थिक, शैक्षणिक व आरोग्यदृष्टया अत्यंत मागासलेला आणि वर्षानुवर्ष डोंगर, दऱ्याखोऱ्या, जंगल अशा अति दुर्गम भागात राहत असलेला आणि शासकीय मदतीवर अवलंबून असलेला नेतृत्वहीन असा आदिम जमात हा होय.

महाराष्ट्रात एकूण ४७ आदिवासी जमाती असून त्यापैकी कातकरी, कोलाम व माडिया गोंड या तीन आदिम जमाती. त्यांची लोकसंख्या ४.३३ लाख असून एकूण आदिवासी लोकसंख्येशी ते प्रमाण ५.९२ टक्के इतके आहे. या तीन आदिम जमातीपैकी कातकरी ही भटकी जमात मूळची कोकणातील. तथापि, कामधंदा व पोटापाण्याच्या व्यवसायासाठी ती सिंधुदुर्ग, रायगड, ठाणे, नाशिक, पुणे व सातारा या जिल्हयात विखुरलेली आहे. कोलाम ही दुसरी जमात प्रामुख्याने गोंडवन (विदर्भ) भागातील चंद्रपूर, वर्धा, यवतमाळ आणि मराठवाडयाच्या नांदेड जिल्हयातील किनवट भागामध्ये आढळून येते. तिसरी माडिया गोंड ही आदिम जमात गोंडाची उपजमात असून ती गडचिरोली जिल्हयातील सूरजगड, भामरागड भागातील घनदाट व निसर्गरम्य सौंदर्याने नटलेल्या भागात वास्तव्य करुन आहे.

सर्वसाधारणपणे या तिन्ही आदिम जमातीचा मुख्य व्यवसाय म्हणजे स्थानिक गरजेप्रमाणे मध गोळा करणे, कंदमुळे गोळा करणे, मोहाची फुले गोळा करुन त्याची दारु काढणे, जंगलातील ससे, चित्ते, खरगोष, हरीण, रानडुक्कर या प्राण्यांची शिकार करणे, आजूबाजूच्या नदी, तलाव, नाले इ.पाणवठयाच्या जागी पोटापुरती मच्छिमारी करणे व जमीन उपलब्ध असेल तर शेती करणे किंवा शेतमजुरी करणे. या तिन्ही

*माजी उपसंचालक, आदिवासी संशोधन व प्रशिक्षण संस्था, महाराष्ट्र राज्य, पुणे १

आदिम जमातीशी सांस्कृतिक जडणघडण पारंपारिक पध्दतीने देवदेवता, पेहराव, रितीरिवाज भिन्न भिन्न असल्या तरी त्यांच्या आरोग्याच्या, शिक्षणाच्या, आर्थिक समस्या समान आहेत. वर्षानुवर्षे हा समाज दुर्गम भागात वास्तव्य करुन असल्यामुळे व शिक्षणाअभावी त्यांच्यात निरक्षरतेचे प्रमाण फार मोठे आहे. १९९८-९९ च्या बेंचमार्क सर्वेक्षण अहवालाप्रमाणे कातकऱ्यामध्ये ८४%, कोलामामध्ये ६३% तर माडिया गोंडामध्ये ६७% निरक्षरता आहे.

या जमातीचा जंगलाशी घनिष्ट संबंध असल्यामुळे किंबहुना त्यांची रोजीरोटी ही जंगल उत्पादनाशी निडीत असल्याने मध काढताना, मधमाशा चावल्यामुळे किंवा झाडावरुन पडल्यामुळे मृत्यु येणे. किंवा कायमस्वरुपी अपंगत्व येणे. कंदमुळे गोळा करताना व लाकूडफाटा गोळा करताना अनवाणी फिरल्यामुळे सर्पदंश होऊन मरणे, जंगली जनावरांना बळी पडणे, मासेमारी करताना पाण्यात बुडून मृत्यु येणे किंवा दारुच्या अतिसेवनामुळे किंवा विषारी दारु पिल्यामुळे मृत्यु येणे, अंधत्व येणे, निकृष्ट प्रतीचे अन्न सेवन केल्यामुळे मरणे येणे. अशा विविध कारणाने आदिम जमातीमध्ये मृत्युमुखी पडण्याचे प्रमाण अधिक आहे. वरील कारणास्तव या जमातीतील कर्ता पुरुष किंवा स्त्री मरण पावली की ही कुटुंबे उघडी पडतात. त्यासाठी एक उत्तम पर्याय म्हणजे शासनाने आदिम जमातीच्या कुटुंबाचे सर्वेक्षण करुन त्या आधारे प्रत्येक कुटुंबांचा सामूहिक विमा उतरावा व त्यासाठी दरडोई रु.३/- प्रमाणे अंदाजे रु.४.५० लाख आदिम जमातीसाठी रु.१३.५० लाखाची तरतूद विमा कंपनीकडे जमा केल्यास त्यातून अपघाताने मृत्यु किंवा कायमस्वरुपी अपंगत्व आलेल्या व्यक्तीच्या कुटुंबाला विमा योजनेतून रु.१०,०००/- अशी आर्थिक मदत मिळू शकेल. न्युक्लिअस बजेटमधून अशी तरतूद अपर आयुक्त, आदिवासी विकास यांच्या स्तरावर मंजूर करण्यात यावी. त्यासाठी संबंधित प्रकल्प अधिकारी, एकात्मिक आदिवासी विकास प्रकल्प, हे समन्वय अधिकारी (Middle officer) म्हणून राहतील.

आदिम जमातीला इतर सुधारलेल्या आदिवासीपर्यंत आणण्यासाठी त्यांच्या शारिरीक, आर्थिक व शैक्षणिक कुवतीप्रमाणे आणि त्या भागातील मूलभूत भौगोलिक सुविधांच्या आधारे न्युक्लिअस बजेटमधून मधुमक्षिका पालन, मच्छिमारीसाठी नायलॉनची जाळी, वीटभट्टी योजना, कुक्कुटपालन इ.आर्थिक विकासाच्या योजना कमीत कमी ५ वर्षे सातत्याने राबविणे आवश्यक आहे. या व्यतिरिक्त शासनाच्या निरनिराळ्या लेखाशीर्षाखाली आदिवासी विकासासाठी कोटयावधी रुपयांची तरतूद केली जाते. त्याचप्रमाणे जिल्हास्तरावर आदिवासी उपयोजनामार्फत (डी.पी.डी.सी.) कडूनही तरतूद केली जाते. त्यापैकी जास्तीत जास्त तरतूद आदिम जमातीसाठी खर्च करावी. या तरतूदीमधून ही आदिम जमात ज्या ठिकाणी वास्तव्य करुन आहे त्या ठिकाणी इ.७ वी पर्यंत आश्रमशाळा, प्रौढ शिक्षणाची व्यवस्था, लघुउद्योग, बारमाही रस्ते, लहानलहान पूल,

पाणीपुरवठयाच्या योजना, विद्युतीकरण अशा स्वरुपाच्या योजना हाती घेणे आवश्यक आहे. सर्वात महत्वाची बाब म्हणजे या आदिम जमातीचे पुनर्वसन करुन त्यांना इंदिरा आवास योजनेमधून पक्की घरे बांधून दिल्यास त्यांच्या निवासाचा प्रश्न कायमस्वरुपी सुटेल. या निवासाशेजारी प्राथमिक आरोग्य केंद्राची व्यवस्था करणे आवश्यक आहे. या आदिम जमातीमध्ये विशेषत: कातकरी समाजामध्ये नेतृत्वाचा अभाव आहे. असे नेतृत्व या जमातीमधील तरुणामध्ये निर्माण करण्यासाठी प्रकल्पस्तरावर नेतृत्व प्रशिक्षण शिबिरे आयोजित करावीत.

वरीलप्रमाणे विविध स्वरुपाच्या योजना आदिम जमातीसाठी सतत ५ वर्षे राबविल्यास या तिन्ही जमाती इतर सुधारलेल्या आदिम जमातीबरोबरच येण्यास मदत होईल. पहिल्या परिच्छेदात नमूद केल्याप्रमाणे महाराष्ट्राच्या मायबाप शासनाने वरील दोन सुधारलेल्या समाजाप्रमाणेच उपेक्षित अशा तिसऱ्या आदिम जमातीकडे अधिक लक्ष पुरविल्यास खऱ्या अर्थाने या जमातीला न्याय दिल्यासारखे होईल.

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# श्री.चंदर धोंडू सोळे आदिवासी कारागिराने बांबू हस्तकलेने उभारलेला आपला संसार

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मनुष्य तसा कारागिरच मग तो आदिवासी का असेना ! कारागिर मानावाने जगात अशा कलांच्या क्लृप्त्या निर्माण केल्या आहेत की जणू त्याला काही परिसीमा उरलीच नाही. काळाच्या ओघात हे सारं काही घडत हे साध्य करण्यामध्ये त्यांच्या कुटुंबियाचाही तेवढाच मोठा वाटा असतो. कुटुंब जर सुशिक्षित असेल तर साहजिकच चांगल्या संस्कारातून उत्कृष्ट कारागिर निपजतात. परंतू अशिक्षित आदिवासी कुटुंबाचा विचार केला तर शक्य नसल्यानेच आतापर्यंत तरी आपण अनुभवलेले आहे. विकासामध्ये समरस होणारा अन्य समाज ज्याप्रमाणे विविध क्षेत्रात पुढे आला त्या बरोबरीने आदिवासी समाज पुढे यावयास पाहिजे होता. कदाचित आदिवासी समाजातील मागासलेपणा, शिक्षणाचा अभाव, अंधश्रध्दा या कारणामुळे विकास साधू शकला नाही हे एक कंटू सत्य म्हणावे लागेल. मात्र अशाही परिस्थितीत स्वत:च्या अंगी बाळगून असलेली कला वृध्दींगत करण्याच्या ध्यासास अडकलेला सुरगाणा तालुक्यातील दरापाडा या गांवचा आदिवासी युवक श्री.चंदर धोंडू सोळे स्वत:च्या कलागुणांनी ग्रामीण कारागिर म्हणून नावलौकिकास उतरला आहे. एवढेच नव्हे तर त्यांनी बांबूपासून सुबक अशा आकर्षक वस्तु तयार करणारा एक ग्रामीण कारागिर म्हणून जनमानसात आपली छबी निर्माण केली आहे. श्री.चंदर धोंडू सोळे यांनी हे कसे साध्य केले. त्यांनी दिलेली माहिती खालीलप्रमाणे आहे.

मूळत: आदिवासी गांवात वाढलेल्या तरुण बांबूपासून घरगुती वस्तु तयार करण्याची कला त्यांनी अवगत केली. अशा वस्तु विकून त्याला थोडे पैसेही मिळू लागले. परंतू बांबूपासून विविध आकर्षक वस्तु कशा तयार करता येईल हा एकच ध्यास मनात बाळगणाऱ्या चंदर सोळेला एके दिवशी कलेचा मार्ग गवसला. महाराष्ट्र शासनाच्या आदिवासी विकास विभागातर्फे आदिवासी ग्रामीण कारागिरांना बांबूपासून आकर्षक वस्तु बनविण्याचे प्रशिक्षण देण्यात आले. या प्रशिक्षणाचा लाभ चंदर सोळे यांनी घेतला. स्वत:च्या गांवास जाऊन बांबूपासून सूर्य, सिट्टी, आकाशदिवा, लेटरबॉक्स, डिंगळीहोळी, परडी, फलपरडी, पेनबॉक्स, कंगण, टोप्या इत्यादी आकर्षक वस्तु त्यांनी तयार केल्या.

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नाशिक येथे दिनांक ६ ते १० एप्रिल,२००२ पर्यंत शासनाच्या सांस्कृतिक कार्य संचालनालयातर्फे लोकोत्सव कार्यक्रम घेण्यात आला होता. यावेळी स्वयंरोजगारी व ग्रामीण कारागिरांनी उत्पादित केलेल्या वस्तु प्रदर्शन व विक्रीकरिता स्टॉल मांडले होते. दरापाडा तालुका-सुरगाणा येथील नागरिकांनी शासनाच्या उपक्रमाला दाद देत महालक्ष्मी स्वयंसहाय्यत बचत गट तयार केले. या गटानेही एक स्टॉल लावला होता. या बचत गटाचे अध्यक्ष स्वत: चंदर धोंडू सोळू यांनी अधिकाऱ्यांचे मार्गदर्शन घेऊन महालक्ष्मी स्वयं सहाय्यता बचत गटातील सदस्यांना स्थानिकरित्या स्वयंरोजगाराची संधी निर्माण करुन दिली. त्यांनी पंजाब नॅशनल बँक उंबरठा कडून २५ हजार रुपये कर्ज घेऊन भागभांडवल उभे केले. बांबूपासून तयार केलेल्या आकर्षक वस्तु खरेदीचा मोह भेटी देणाऱ्यांनाही आवरता आला नाही. राज्याचे वन व पर्यावरण मंत्री ना.श्री.स्वरुपसिंग नाईक, वने रोजगार, स्वयंरोजगार राज्यमंत्री ना.श्री.ए.टी.पवार, महसूल आयुक्त श्री.विजय माथनकर व अन्य मान्यवरांनी महालक्ष्मी स्वयंसहाय्यत बचत गटांनी लावलेल्या बांबूच्या वस्तु खरेदी केल्या व ग्रामीण आदिवासी कारागिर श्री.चंदर धोडू सोळे यांच्या कलाकसुरीच कौतुक केले. बाबूंच्या विक्रीपासून जवळ जवळ ६१०० रुपयाचे उत्पन्न मिळाले. कला साध्य करण्यासाठी आवश्यक असलेली आवड व जिद्द उराशी बाळगणारा चंदर सोळेंना बांबूपासून सुबक अशा शोभेच्या वस्तुपासून उत्पन्न मिळविण्याचा मार्ग गवसला. हे साध्य करण्यामध्ये आदिवासी विकास विभागाचे अधिकारी, जिल्हा ग्रामीण विकास यंत्रणा व वन विभागातील अधिकाऱ्यांचे विशेष मार्गदर्शन लाभल्यामुळे बांबूपासून वस्तु तयार करु शकलो असे मनोगत त्यांनी व्यक्त कले आहे.

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# पाणलोट क्षेत्र विकास कार्यक्रमांतर्गत वासाळी व वारशिंगवे आदिवासी गांवाचा कायापालट

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मौजे वासाळी व बारशिंगवे हे आदिवासी गांव नाशिक जिल्हयातील इगतपूरी तालुक्यातील ही गांवे घोटी भंडारदरा या रस्त्यावर इगतपूरी शहरापासून २७ कि.मी.अंतरावर आहे.

जलसंधारण कार्यक्रमासाठी पडित क्षेत्र जास्त या निकषानुसार या दोन गांवाची पश्चिम घाट विकास कार्यक्रमांतर्गत पाणलोट क्षेत्र विकासासाठी निवड करण्यात आली. महाराष्ट्र शासन शेती व शेतकऱ्यांच्या हिताच्या दृष्टीने अनेक कल्याणकारी योजना राबवित आहे. त्याचाच भाग म्हणून पाणलोट क्षेत्राचा विकास करण्यासाठी कृषी खात्याकडून नियोजन करण्यात येऊन दोन्ही गांव मिळून एक पाणलोट व त्यांचे उपपाणलोट पाडून गांवाचा प्रकल्प विकास आराखडा तयार करण्यात आला. ही संपूर्ण गांवे उपपर्वतीय विभागात असून या प्रकल्पाचे भौगोलिक क्षेत्र २१३४ हेक्टर असून वहितीलायक क्षेत्र १४७० हेक्टर एवढे आहे. प्रकल्पात समाविष्ट बहुतांशी लाभधारक आदिवासी आहेत. निसर्गाच्या कुशीत आणि डोंगरदऱ्या राहणारा आदिवासी म्हटला की आपल्या डोळयासमोर चटकन चित्र येते ते कमरेला लंगोटी लावलेला आणि अंग झाकण्यापुरते कापड घेऊन प्राण्यांचे मागे तिरकामठा घेऊन शिकारासाठी जंगलात धावणारा आदिम जमातीचा माणूस. परंतू शासकीय योजनांचा लाभ घेऊन आपला विकास आप्रण करण्यासाठी संघटीतपणे प्रयत्न केल्यास गांवाचा विकास कसा होतो हे या प्रकल्पातील आदिवासी बांधवांनी दाखवून दिलेले आहे.

प्रकल्पाच्या परिसरातील पर्जन्यमान २५०० ते २६४८ मि.मि.इतके आहे. पडणाऱ्या पावसाचा प्रत्येक थेंब अडविला जावा म्हणून या गांवाच्या परिसरात १५ हेक्टरवर वनीकरण करुन ८ सिमेंटचे नालाबांध, १८३, दगडीबांध, ८ वळण बंधारे, १६ मातीचे लहान बंधारे अशी पाण्याचा निचरा होणारी कामे करुन जलसंधारणाचे कामाला प्राधान्य देण्यात आले. पडित जमीन विकास कार्यक्रमांतर्गत ६९४.०० हेक्टरवर मजगी करण्यात आली. तसेच या परिसरात मोठया प्रमाणात वनीकरण करण्यावर भेट देऊन वृक्ष लागवड करण्यात आली.

प्रकल्पातील गांवात शेतकरी केवळ भात, नागली पिकवित होतो. परंतू

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जलसंधारणाचा जो प्रभावी कार्यक्रम राबविला गेला त्यामुळे आता रब्बीच्या हंगामात गहू, भाजीपाला, मका इत्यादी पिके घेतली जात आहेत. खरीपात सुध्दा भाताचे क्षेत्र व उत्पादन मोठया प्रमाणात वाढले आहे. बारशिंगवे येथे उन्हाळी मका, भाजीपाला, ऊस, कांदा, इत्यादी पिके इथला शेतकरी घेऊ लागला आहे. साहजिकच इथल्या शेतकऱ्यांना आपले शेती पीक नाशिक व मुंबईच्या बाजारपेठेत पाठवून पैसे कमविण्याची संधी मिळाली आहे.

जलसंधारणाच्या प्रभावी अंमलबजावणीमुळे परिसरातील क्षेत्रात सिंचनासाठी पाण्याची शाश्वती निर्माण झाल्याने गेल्या ५-६ वर्षामध्ये ४१.०० हेक्टर क्षेत्रावर फळपिकांची लागवड करण्यात आली. यामध्ये प्रामुख्याने हापूस, केशरआंबा, पेरु, चिकू या पिकांचा समावेश आहे. याप्रमाणे फळउत्पादनही सुरु आहे.

वृक्ष लागवड वैरण, विकास व वन क्षेत्रातील लागवडीमुळे दुग्धोत्पादन वाढीसाठी गायी, म्हशीच्या संख्येत वाढ केली व वैरण विक्री करुन आदिवासी शेतकरी सुध्दा त्यापासून उत्पन्नाचा लाभ घेत आहे. सिमेंट व मातीच्या नालाबांधा द्वारे भूगर्भातील पाण्याच्या पातळीत वाढ झाली आहे. वासाळी व बारशिंगवे येथे कृषी खात्याने बांधलेल्या सिमेंट नालाबांधाच्या अडविलेल्या पाण्याचा लाभ घेणाऱ्या लाभार्थी शेतकरी श्री.निवृत्ती अर्जुन याने त्यापासून काय लाभ झाला विचारले असता त्यांनी सांगितले की, पूर्वी पावसाच्या पाण्यावर पीके अवलंबून असायचे. त्यामुळे इतर मौसंमामध्ये शेती पिकासाठी पाण्याचामोठा तुटवडा भासायचा. परंतू आता पाणलोट क्षेत्र विकासाच्या योजना या गांवात राबविल्यामुळे या योजना शेतकऱ्यांसाठी फलदायी ठरु लागल्या आहेत. पाणलोट क्षेत्र विकासाअंतर्गत श्री.बांडे यांच्या शेतीजवळ बांधलेल्या सिमेंट नालाबांधामुळे वर्षभर पाण्याचा साठा उपलब्ध असून साठयातील खोदलेल्या विहिरीतून पाईपलाईनद्वारे शेतजमिनीपर्यंत पाणी घेऊन बांधालगतच्या ओसाड आणि पडिक जमिनीत हिरवागार भातपिक भाजीपाला, ऊसशेत पीक आता पहावयास मिळते. श्री.बांडे व त्यांच्या कुटुंबियांसाठी बंधाऱ्याच्या पाण्याचा वापर करुन २५ हजार रुपयांचे उत्पन्न मिळविले आहे.

दुसरे शेतकरी श्री.केशव गजीमल लहामर्ग यांना झालेल्या लाभाबाबत त्यांनी सांगितलेली माहिती अशी योजनेत केलेल्या मजगी कामुळे त्यांच्या हलकी व पडित जमिनीत भाजीपाला भात व बटाटे या पिकांचे किफायतशीर उत्पन्न त्यांना मिळत आहे. सिमेंट नाला बांधामुळे त्यांच्या विहिरीच्या पाण्याच्या पातळीत वाढ झाली आहे.

आगासखिंड गांवचे सरपंच श्री.केशव गजिमल लहामगे यांनी राबविण्यात आलेल्या मृदसंधारण फळबाग लागवड, योजनेबाबत समाधान व्यक्त केले आहे. गांवातील मजुरांनाही त्याच ठिकाणी मजुरी उपलब्ध झाली आहे. या दोन गांवात केलेल्या भरीव विकास कामाने गांवात कर्जबाजारी व खायला दाणा नसलेल्या शेतकऱ्यांच्या शेतीवर १०० टक्के अनुदानातून मजगीची कामे करुन मिळाली असून पाणलोट क्षेत्र विकासामुळे व पाणी अडवा, पाणी जिरवा योजनेने शेतकऱ्यांच्या शेतामध्ये विविध पिकांचे उत्पन्नात वाढ झाली आहे.

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शासकीय फोटोझिंको मुद्रणालय, पुणे - १.

मा. दिलीपसिंह भुरिया अध्यक्ष अनुसूचित जनजाती आयोग नयी दिल्ली हे आदिवासी संशोधन व प्रशिक्षण संस्था पुणे येथे दि.१४ जानेवारी २००४ रोजी बैठक घेत असताना.

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